## Office of the Mayor San Francisco



LONDON N. BREED MAYOR

September 16, 2019

The Honorable Garrett L. Wong Presiding Judge, Superior Court of California, County of San Francisco 400 McAllister Street, Room 008 San Francisco, CA 94102-4512

Dear Judge Wong,

In accordance with Penal Code 933 and 933.05, the following is in response to the 2018-2019 Civil Grand Jury Report, Act Now Before It Is Too Late: Aggressively Expand and Enhance Our High-Pressure Emergency Firefighting Water System. We would like to thank the members of the 2018-2019 Civil Grand Jury for their interest in disaster preparedness and in improving the resiliency of our critical public safety infrastructure to provide robust emergency firefighting to all communities in San Francisco.

San Francisco continues to improve our City's resiliency each day through our ongoing investments in public infrastructure and equipment. Our Capital Planning Program coordinates much of these investments by conducting strategic long-term planning across major programs and projects, including the Emergency Firefighting Water System and Earthquake Safety and Emergency Response (ESER). The ESER bonds approved by voters in 2010 and 2014 have funded improvements to cisterns, pipelines, and critical public facilities that improve the City's ability to respond in emergencies and to fight fires. In addition, through the City's annual budgeting process, we will continue weighing resources to improve public safety and the operational readiness and emergency response capabilities of our departments. For example, our most recently adopted FY 2019-20 budget includes funding for five new hose tenders to replace and enhance the Fire Department's aging equipment.

In March 2020, the voters of San Francisco will once again vote on a new \$628.5 million ESER bond measure. Included in the proposal is an investment of an additional \$153.5 million for the Emergency Firefighting Water System.

We appreciate the opportunity to comment on the Civil Grand Jury report findings and recommendations. Moving forward, and as appropriate, the City plans to analyze many of the recommendations as part of our next 10-Year Capital Plan.

A detailed response from the Mayor's Office, City Administrator's Office, Fire Department, Public Utilities Commission, and the Department of the Environment is attached.

Each signatory prepared its own responses and is able to respond to questions related to its respective part of the report.

Indu Brock

London N. Breed Mayor

Harla & Welly

Harlan L. Kelly Jr. General Manager, Public Utilities Commission

Jeanine Nicholson Chief, Fire Department

Naomi Kelly City Administrator Deborah Raphael
Director, Department of the Environment

Recommendation Response Text	Ensuring that San Francisco has the infrastructure and resources to be well prepared to fight firest in all parts of San Francisco is something that will be a focus of the next 10-standard but the sound that the submitted to the Mayor and Board no later than March 1 of each odd-unwhered year for approval no later than May 1. The requested presentation would be to delivered as pan of that Plan's submission to delivered as pan of that Plan's submission to enable holistic planning across San Francisco's resilience challengs. Update available on this timeline would be included. The city cannot discuss the project and timeline until the ESER 2020 plan passes. For this reason, the City will sync this recommendation with the Capital Plan's and push back the timeline to December 31, 2020.	The commitment of sources for specific uses on specific timelites for San Francisco's public infrastructure is the work of the 10-Year Capital Plan. The plan discussed in Recommendation 1 will be acknowledged in the Capital Plan, and abased on analysis, will be done on the capital plan in the sake on analysis, will be done on the capital plan in the line. The capital planning process gathers, documents, and balances planned funding for needs across the public infrastructure portfolio and across San Francisco's resilience challenges. The Capital Plan has longstanding funding principles to guide the prioritization of public infrastructure investments. These investments are tiered; (1) address legal and/or regulatory mandates; (2) address legal and/or regulatory mandates; (2) address legal and/or regulatory mandates; (3) promote conomic development. In the next 10-Year Capital Plan and those that foliow, the City will continue to analyze priority projects and programm and identify sources to advance those priorities. Committing to entirely funding a single program out of context and without regard for the trade-offs of that commitment would be out of step with the City's longstanding and highly regarded capital planning process and likely create significant voulde resulties elsewhere in the portfolio.
Recommendation Response (Implementation)	Will be implemented	analysis
Respondent Assigned by CGJ [Response Due Date]	Mayor [September 15, 2019]	Mayor (September 15, 2019)
Recommendation (text may be duplicated due to spanning and multiple respondent effects)	By no later than December 31, 2020, the Mayor, respect, the SEPUC, the SEP Ch, and the Office of Resilience and Capital Planning should jointly present to the Board of Supervisors a detailed plan to the Board of Supervisors a detailed plan to the acceptance the Clift, swell prepared to fight fires in all parts of San Francisco in the event of a 1906-magnitude (7.8) earthquake.	The plan discussed in Recommendation R1 should include a detailed proposal, including financing source, for the Installation within 15 years of a high-pressure, multi-sourced, seismically safe emergency water system for those parts of the City that don't currently have one, i.e., by no later than Jure 30, 2034.
R# [for F#]	R1 [1071-16] [10]	[for F1-F6]   1   1   1   1   1   1   1   1   1
Finding Response Text	The SFPUC, SFFD, and San Francisco Public (Morks (SFPW) are committed to increasing fire protection throughout San Francisco. Since the passage of the first Earthquake Salety and Francisco Since the passage of the first Earthquake Salety and Francisco Stopports Bond in 2010, that three agencies branches benefit in prove the AWSS system's seismic reliability and range of coverage. Chalmoning the AWSS range of coverage, chalmoning the AWSS range of coverage to all passas of the Chalmonia of the allocation of funds to do so. The require the allocation of funds to do so. The implement projects utilizing new and proven technologies that improve upon the original system design. There have been many retemnologies that improve upon the original advancements in earthquake resistant pipeline design and materials, hydrants, and seismic valves since the early 1900s, and the City intends to use the best possible technology available to meet the performance standards of the SFPD.	The SFPUC, SFFD, and San Francisco Public Movks (SFPW) are committed to increasing fire protection throughout San Francisco, Since the passage of the first Eardquake Safety, and Emergency Response Bond in 2010, the three agencies have been implementing projects to improve the AWS system's seismic reliability and range of coverage. Enhancing the AWSS and en of coverage to all crass of the City would require the allocation of funds to do so. The three agencies will Continue to develop and implement projects utilizing new and proven technologies that improve upon the original system design. There have been many advancements in earth topical system design, where any 1900s, what is estimic design and materials, hydrants, and seismic design and the city design design and design and design and design and desig
Finding Response (Agree/Disagree)	Agree with the finding	Agree with the finding
Respondent Assigned by CGJ [Response Due Date]	Mayor [September 15, 2019]	Mayor [September 15, 2019]
Finding (text may be duplicated due to spanning and multiple respondent effects)	The City's high-pressure emergency water supply system, known as the Audillary Water Supply system (kWSS), does not cover large parts of Supervisorial Districts 1, 4, 7 and 11, 10, 10, 10, 10, 10, 10, 10, 10, 10,	The City's high-pressure emergency water supply system, known as the Auxiliary Water Supply System, known as the Auxiliary Water Supply System (AWSS), does not cover large parts of Supervisorial Districts 1, 4, 7 and 11, roughly one-third of the City's developed area. As a result, these districts are not adequately protected from fires after a major earthquake.
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Report Title [Publication Date]	Act Now Before It Is Agglessively Expand and Enhance Our and Enhance Our Ernergency Firefighting Water System [July 17, 2019]	Act Now Before it is Agessively Expand Agessively Expand and Enhance Our High-Pressure Emergency Firefightling Water System (July 17, 2019)

Recommendation Response Text	Ensuring that San Francisco has the final instanteurus and resources to be well prepared to fight fires in all parts of San Francisco is something that will be a focus of the next 10-10 fear chairs believe that the san considerable to the Mayor and Board no later than March 1 of each odd-mombered year for approval no later than May 1. The requested presentation would be delivered as part of that Plan's submission to each period in parts and parts holds: Considerable folistic planning across San Francisco's resilience challenges. Updates available on this timeline would be included. The City cannot discuss the profest and fimilier until the ESR 2020 plan passes. For this reason, the City will sync this recommendation with the Capital Plan, and push back the timeline to December 31.	The commitment of sources for specific uses on specific timelines for San Francisco's public infrastructure is the work of the LOPear Capital Plan. The plan discussed in Recommendation 1 will be acknowledged in the Capital Plan, and plan discussed in Recommendation 1 will be acknowledged in the Capital Plan, and plan and plan discussed in the Capital planning process gathers, documents, and balances planned infrastructure portfolio and across San Francisco's resilience challenges. The Capital Infrastructure profitolio and across San Francisco's resilience challenges. The Capital Infrastructure profitolio public infrastructure profitolio public infrastructure profitolic salety and enhance resilience; (3) preserve assets and promote sustainability; (4) and dorest legal and for regulatory mandates; (2) ensure public salety and enhance resilience; (3) preserve assets and promote sustainability; (4) and programs and identify sources to advance those priorities. Committing to entitely funding a single program out of context and without regard for the trade-offs of that commitment would be out of step with the City's longstanding and highly regarded capital planning process and likely crease significant vulnerabilities elsewhere in the portfolio.
Recommendation Response (Implementation)	Will be implemented	analysis
Respondent Assigned by CGJ [Response Due Date]	Mayor [September 15, 2019]	(September 15, 2019)
Recommendation (text may be duplicated due to spanning and multiple respondent effects)	by no later than December 31, 2000, the Mayor, the SFDUC, the SFD, and the Office of Resilience and Capital Planning should jointly present to the Board of Supervisors a detailed plan to the Board of Supervisors a detailed plan to any same the City's law lip prepared to fight fires in all parts of San Francisco in the event of a 1906-magnitude (7.8) earthquake.	The plan discussed in Recommendation R1 should include a detailed proposal, including financing succes, for the histallation within 15 years of a high-pressure, multi-sourced, seismically safe emergency water system for those parts of the City that don't currently have one, I.e., by no later than June 30, 2034.
R# [for F#]	(for F1-F6)	[for F1-F6]
Finding Response Text	As the Chy considers what Is essential to protect San Francisco, it is important to acknowledge four multiple, complex resilience challenges. These challenges are decumented in the Resilient Strategy (2016) and underlie the strategic efforts of our capital investments as represented in the LD/ver Capital plan (last updated 2019). These challenges are: Earthquakes, Sea Level Risk/Climate Change, Aging Infrastructure, Unaffordability, and Social inequity. All of these challenges represent meaningful threats to San Franciscans, their property, and their ability to make a life in the city. In making decisions about priority investments, San Francisco must keep an eye on all of these challenges, identify the areas of greatest need corross them, and make proggess on all fonts simultaneously. The City has taken signated the pressure that the first Earthquake Salety and Emergency Response don in 2010, spruc, SFPD, SPD, SPD, SPD, SPD, SPD, SPD, SPD, S	As the City considers what is essential to protect San Fanctisco, it is important to acknowledge our multiple, complex resilience challenges. These challenges are documented in the Resilient SF strategy (2016) and underlie the strategic efforts of our capital investments as represented in the 10 Year Cipital Plan (last updated 2019). These challenges are: Earthquakes, Sea Level Rise/Cimate Change, Aging infrastructure, Unaffordability, and Social nequity. All of these challenges represent meaningful threast to San Franciscon was their in the city, in making decisions about priority investments, and Franciscon wast keep an eye on all of these challenges, identify the areas of greatest need across them, and make progress on all fronts simulaneously. The City has taken all franciscon and if incust simulaneously. The City has taken significant steps since 2010 to ensure that the City has a high-pressure multi-sourced, segmindla steps since 2010 to ensure that the City has a high-pressure multi-sourced, segmindla steps since 2010 to ensure that the City has a high-pressure multi-sourced, segmindla steps since 2010 to ensure that the City has a high-pressure multi-sourced, segmindla steps since 2010 to ensure that the City has a high-pressure multi-sourced, segmindla state in the segmindla state of coverage. The three agencies will continue to the system's seizmic reliability and range of coverage. The three agencies will continue to implement projects utiliting new and proven technologies that improve upon the original system design.
Finding Response (Agree/Disagree)	Agree with the finding	finding finding
Respondent Assigned by CGJ [Response Due Date]	(September 15, 2019)	(September 15, 2019)
Finding (text may be duplicated due to spanning and multiple respondent effects)	A high-pressure, multi-sourced, seismically safe in emergency firelighting water supply will be costly but is essential to protect the City.	A high-pressure, multi-sourced, seismically safe emergency firelighting water supply will be costly but is essential to protect the City.
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Report Title [Publication Date]	too Late: Too Late: Aggressively Expand Aggressively Expand and Enhance Our High-Fressure Emergency Firerighting Water System [July 17, 2019]	Act Now Before it is Togotase: Aggressively Expand and Enhance Our High-Pressure Friefighting Water System [July 17, 2019]

Recommendation Response Text	Will be implemented The analysis will be performed as part of the Carlos 10 of	Will be implemented Ensuring that San Francisco has the infrastructure and resources to be well prepared to folgiff their and lapars of San Francisco is something that will be a focus of the next 10. Year Capital Plan. Per Administrative Code 3.20, that Plan must be submitted to the Mayor and Board no later than March 1 of each odd-numbered year for approval no later than May 1. The requested presentation would be delivered as part of that Plan's submission to enable holistic planning across San Francisco's resilience childlenges. Updates available on this timeline would be included. The City cannot discuss the project and timeline until the ESER 2020 plan passes. For this reason, the City will sync this recommendation with the Capital Plan, and push back the timeline to December 31, 2021.
Recommendation Response (implementation)	Will be implemented	Will be implemented
Respondent Assigned by CGJ (Response Due Date)	(September 15, 2019)	(September 15, 2019)
Recommendation (text may be duplicated due to spanning and multiple respondent effects)	by no later than June 30, 2022, the Mayor and he based of Supervisors should analyse whether [September 15, 2019] to propose a separate bond for the development of a high-pressure, multi-sourced, selsmically stale empressry water system for those parts of the City that of cut currently have one, with a target date of completing construction by no later than June 30, 2034.	By no later than December 31, 2020, the Mayor, Mayor the SFPUC, the SFPU, and the Office of Resillence [September 15, 2019] and Capital Planning broud jointly present to the Board of Supervisors a detailed plan to ensure the City is well prepared to fight fires in all parts of San Francisco in the event of a 1906-magnitude (7.8) earthquake.
R# [for F#]	R8 (for F5, F6, F1)	R1 [for F1-F6]
Finding Response Text	As the City considers what is essential to protect on a farancisco, it is important to acknowledge [6] our multiple, complex resilience challenges.  These challenges are documented in the feeling strategic efforts of our capital investments as represented in the 10-Year Capital plan (last addated 2012). These challenges are: Earthquakes, Sea Leve Risky (Dinnate Change, Aging infrastructure, Unaffordability, and Social Inquedity. All of these challenges are: Fanchquises, Sea Leve Risky (Inmate Change, Aging infrastructure, Unaffordability, and Social Inquedity, All of these challenges, their property, and their ability to make a life in the represented in the company of the system's seisnic reliability and ange of the first Earthquake Safety and Emergency Response have been implementing projects to improve the system's seisnic reliability and ange of coverage. The three agencies will continue to implement projects utiliting new and proven technological that improve upon the original system of the company of the controller of the con	Decisions about programming and funding levels of fruture ESRR bonds and other complementary is sources that could support the expansion of the AWSS have yet to be made.
Finding Response (Agree/Disagree)	finding	Disagree, wholly
Respondent Assigned by CGJ [Response Due Date]	(September 15, 2019)	[September 15, 2019]
Finding (text may be duplicated due to spanning and multiple respondent effects)	A high-pressure, multi-sourced, seismically safe in emergency fireflighting water supply will be costly but is essential to protect the City.	Unless the City increases funding levels, it will be Mayor several decades (i.e., after the USGS predicts one or more major earthquakes will county before the southern parts of the City have a high-pressure, multi-sourced, selsmically safe emergency firefighting water supply.
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Report Title [Publication Date]	Act Now Before It Is Agerssively Expand and Enhance Our and Enhance Our Emergency Frefighting Water System [Luly 17, 2019]	Act Now Before it is Too Late: Agerssively Expand and Enhance Our High-Pressure Energency Firefighting Water System [Luly 17, 2019]

Recommendation Response Text	The commitment of sources for specific uses on specific tusines for San Francisco's public infrastructure is the work of the 10-Year Capital Plan. The plan discussed in Recommendation 1 will be setrowiveleged in the Capital Plan, and based on analysis, will be done on the capital plan inmeline. The capital planning process gather, Accuments, and balances planned infrastructure portfolio and across San Francisco's resilience rellaneges. The Capital Plan has longstanding funding principles to guide the prioritization of public infrastructure investments. These thrusstranes are tiered; (1) address legal and for regulatory mandates; (2) ensure public safety and enhance resilience; (3) preserve assets and promote sustainability; (4) advance planned and programmatic needs; and divance economic development. In the next 10-Year Capital Plan and those that follow, the City will contitute to analyze priority projects and program out of context and without regard for the trade-offs of that commitment would be out of step with the City's longstanding and highly regarded capital plan phocess and likely create significant undersabilities elsewhere in the portfolio.	The Fire Department has been allocated funding to purchase five units through funds from the PY19-20 City budget and an allocation from the State. The Department is currently working with the Office of Contract Administration to develop a multi-year term contract for hose tenders so in the case that additional funding is secured in future years, the Department will be able to reduce the amount of time for procurement of the apparatus. Each hose tender cost \$1 million each, and we need to weigh purchase of additional hose tender to other budget request and priority.	Will be implemented The analysis will be performed as part of the City's 10-Year Capital Plan development process. The next full update to the Capital Plan will be submitted to the Mayor and Board not later than March 1, 2021, for approval no later than May 1, 2021.
Recommendation Response (Implementation)	Requires further The analysis in the plan plan plan plan plan plan plan plan	Requires further The analysis FY3 State the arm the the three three further further for the three each and	Will be implemented The City The sub- sub- sub- tha-
Respondent Assigned by CGJ [Response Due Date]	(September 15, 2019)	(September 15, 2019)	Mayor (September 15, 2019)
Recommendation (text may be duplicated due to spanning and multiple respondent effects)	The plan discussed in Recommendation R1 flanding inducing dealine proposal, including flinancing sources, for the installation within 15 years of a high-pressure, multi-sourced, spears of a high-pressure, multi-sourced, the missing layer energency water system for those pairs of the City that don't currently have one, i.e., by no later than June 30, 2034.	As interim messure, by no later than June 30, Mayor 2021, the City should purchase the 20 new PWSS (September 15, 2019) hose tenders being requested by the SFPD, to replace and expand its currently inadequate inventory.	By no later than June 30, 2022, the Mayor and Mayor the Board of Supervisors should analyze whether (September 15, 2019) to propose a separate bond for the development of a high-pressure, multi-sourced, seismically safe emergency water system for those parts of the City that don't currently have one, with a anaget date of completing construction by no later than June 30, 2034.
R# [for F#]	[for Fa. Fel state of the state	for F6-F7  2   h h ir	R8 (for F5, F6, the F11) to F1
Finding Response Text	Decisions about programming and funding levels forture ESR brooks and other complementary (fix sources that could support the expansion of the AWSS have yet to be made.	Decisions about programming and funding levels of future ESER bonds and other complementary {	Decisions about programming and funding levels of future ESRR bonds and other complementary (from sources that could support the expansion of the AMVSS have yet to be made.
Finding Response (Agree/Disagree)	Disagree, wholly	Disagree, wholiy	Disagree, wholly
Respondent Assigned by CGJ [Response Due Date]	Mayor [September 15, 2019]	(September 15, 2019)	(September 15, 2019)
Finding (text may be duplicated due to spanning and multiple respondent effects)	Unless the City increases funding levels, it will be several decades (it.e., after the offerts one or more major earthquakes will occur) before the sourcen parts of the City have a high-pressure, multi-sourced, seismically safe emergency firefighting water supply.	Unless the City increases funding levels, it will be Mayor several decades (i.e., after the USGS predicts one or more major earthquakes will occur) before the southern parts of the City have a high-pressure, multi-sourced, seismically safe emergency firelighting water supply.	Unless the City increases funding levels, it will be Mayor several decades (i.e., after the USGS predicts one or more major earthquakes will be force the southern parts of the City have a high-pressure, multi-sourced, selsmically sale emergency firefighting water supply.
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Report Title [Publication Date]	Act Now Before it is Agoressive: Agoressive: and Enhance Our and Enhance Our Emergency System [July 17, 2019]	Act Now Before it is Too Late: Aggressively Expand and Enhance Our High-Pressure Energency Frefighting Water System [July 17, 2019]	Act Now Before It Is Too Late: Aggressively Expand and Enhance Our High-Pressure Emergency Firefighting Water System (July 17, 2019)

Recommendation Response Text	Will be implemented. The analysis will be performed as part of the CHAY 10-Vear Capital Plan development process.  The next full update to the Capital Plan will be submitted to the Mayor and Board not later than March 1, 2021, for approval no later than May 1, 2021.
Recommendation Response (implementation)	Will be Implemented
Respondent Assigned by CGJ (Response Due Date)	[September 15, 2019]
Recommendation (text may be duplicated due to spanning and multiple respondent effects)	Ref. By no later than June 30, 2022, the Mayor and Mayor (for 55, fit be Band of Supervisors should analyze whether [September 15, 2019] to propose a separate bond for the development of a high-pressure, multi-sourced, seismically safe emergency water system for those parts of the click that don't currently have one, with a larget date of completing construction by no later than June 30, 2034.
R# [for F#]	R8 (for E5, F6, F11)
Finding Response Text	The EVMS was bull after the 1906 earthquake, and its location, primarily in the northeast portion of San Francisco, corresponds to the location of the majority of the cirk's population at that time. Since 2010, the SPLU, SFPD, and Public Works have made critical improvements to the existing EVMS system. Expanding EVMS is resilient, and reliable would have contradicted best engineering practices. The SPPUC and SFPD best engineering practices. The SPPUC and SFPD best engineering practices. The SPPUC and SFPD are developing plans that would implement a resilient, robust, and redundant potable EVMS that is being developed and analyzed would propose the best method for bringing are resilient, robust, and resilient high-pressure frielighting would propose the best method for bringing and straints to the SFPD frielighters to channel lange fires after a seismic event, and is likely to include over 14 miles of new EVMS pipelines and potentially two new pump stations likely to be supplied by four water sources. The SPFD Cand potentially two new pump stations likely to be supplied by four water sources. The SPFD Cand manner that allows the piping network to be extended in the future to serve additional areas.
Finding Response (Agree/Disagree)	Disagree, partially
Respondent Assigned by CGJ [Response Due Date]	Mayor [September 15, 2019]
Finding (text may be duplicated due to spanning and multiple respondent effects)	The City does not have a timeline to fund and complete development of a high-pressure, multi- (September 15, 2019) sourced, seismically safe emergency water supply for all parts of the City, including poor neighborhoods that thickness had district and many richer neighborhoods.  district and many richer neighborhoods.
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Report Title [Publication Date]	Acr Now Before it is Agrossiate Aggrossiate and Enhance Our and Enhance Our Energence Energence System (July 17, 2019)

Recommendation Response Text	finsuring that San Francisco has the infrastructure and resources to be well prepared to fight fires in all parts of San Francisco is something that will be a focus of the next 10-Year-Capital Plan. The Administrative Code 3.20, that Plan must be submitted to the Mayor and Board no later than March. Lo it each odd.  Board no later than March. Lo it each odd.  Board no later than March. Lo it each odd.  I. The requested presentation would be unumbered year for approval no later than May.  I. The requested presentation would be delivered as part of that Plan's submission to enable holistic planning across San Francisco's resilience challengest. Update available on this timeline would be included. The City cannot discuss the project and timeline until the ESER 2020 plan passes. For this reason, the City will sync this recommendation with the Capital Plan, and push back the timeline to December 31,	The commitment of sources for specific uses on page clife timelines for San Francisco's public infrastructure is the work of the 1D/Pear Capital Plan, The plan discussed in Recommendation 1 wall be acknowledged in the Capital Plan, and based on analysis, will be done on the capital planning process gathers, documents, and balances splanned infrastructure portfolio and across San Francisco's resilience challenges. The Capital Plan has longstanding funding principles to guide the prioritization of public infrastructure infrastructure portfolio and across San Francisco's resilience challenges. The Capital Plan has longstanding funding principles to guide the prioritization of public infrastructure preserve assets and promote sustainability; (4) address legal and/or regulatory mandates; (2) ensure public safety and enhance resilience; (3) advance planned and programmatic needs; and (5) promote economic development, in the next (1) or-bear Capital Plan and those that follow, the City will continue to analyze priorities. Committing to entirely funding a single program out of context and without regarded soften trade-offs of that commitment wound be out of step with the City's flowaganding and publish regarded capital planning process and likely create significant vulnerabilities elsswhere in the portfolio.	Insuring that San Francisco has the infrastructure and resources to be well prepared for old fail frest in lipatrs of San Francisco is something that will be a focus of the next 10-Year Capital Plan. Per Administrative Code 3.20, Hard Plan must be submitted to the Mayor and Board no later than March 1 of each Mayor and Board no later than March 1 of each Mayor and Hard Plan must be submitted to the Mayor and Board no later than March 1 of each Mayor and Hard Plan must be submitted to the Mayor and God and no later than March 1 of each must be resentation would be resilience do sand for that Plan's submission to enable holistic planning across San Francisco's resilience challenges. Updates available on this timeline would be included. The City cannot discuss the project and tuneline until the ESER 2020 plan passes. For this reason, the City will sync this recommendation with the Capital Plan, and push back the tumeline to December 31, 2021.
Recommendation Response (Implementation)	Will be implemented	analysis	Will be implemented
Respondent Assigned by CGJ [Response Due Date]	General Manager, San Francisco Public Utilities Commission [September 15, 2019]	General Manager, San Francisco Public Utilities Commission [September 15, 2019]	General Manager, San Francisco Public Utilities Commission [September 15, 2019]
Recommendation (text may be duplicated due to spanning and multiple respondent effects)	By no later than December 31, 2020, the Mayor, the SPIOC, the SPIP, and the ACIFIC or Resilience and Capital Planning should jointly present to the Board of Supervisors a detailed plan to ensure the City is well prepared to fight fires in all parts of San Francisco in the event of a 1906-magnitude (7.8) earthquake.	The plan discussed in Recommendation R1 should include a detailed proposal, including fanuld include a detailed proposal, including years of a high-pressure, multi-sourced, seismically safe emergency water system for those parts of the City that don't currently have one, i.e., by no later than June 30, 2034.	By no later than December 31, 2020, the Mayor, the SFPUC, the SFFD, and the Office of Resilience and Capital Panning should pinity present to the Board of Supervisors a detailed plan to ensure the City is well prepared to fight fires in all parts of San Francisco in the event of a 1906-magnitude (7.8) earthquake.
R# [for F#]	(for F1-F6)	(for F1-F6)	R1 [for F1-F6]
Finding Response Text	,		The MWISS has been significantly upgraded in the last 15 years through the Water Supply provement Program WiSPI) initiated by the SPPUC. The goals of WiSPI included to reduce vulnerability of the water system to damage from earthquades and increase overall water system reliability. There were 35 in-city projects within the 54.8 billion-dollar program. The WSIP was the largest capital program ever undertaken by San Francisco, and one of the largest water infrastructure programs in the nation. By San Francisco, and one of the largest water infrastructure programs in the nation. Additionally, it is one of the only comprehensive and strategic infrastructure programs targeted specifically at improving a water system's seismic reliability and resiliency. Additionally, it is unique because the WSIP utilized a 7.8 magnitude earthquake as its seismic telebolity.
Finding Response (Agree/Disagree)	Agree with the finding	Agree with the finding	Disagree, partially
Respondent Assigned by CGJ [Response Due Date]	General Manager, San Francisco Public Utilities Commission [September 15, 2019]	General Manager, San Francisco Public Utilities Commission [September 15, 2019]	General Manager, San Francisco Public Utilities r Commission [September 15, 2019]
Finding (text may be duplicated due to spanning and multiple respondent effects)	Fires resulting from an earthquake represent a significant risk of videspread damage and potential loss of life in San Francisco.  Significant risk of videspread damage and potential loss of life in San Francisco.		The municipal water supply system (MMSS) is highly vulnerable to damage from a major earthquake and is not a reliable source for water supply for firelighting after a major earthquake.
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Report Title [Publication Date]	Act Now Before it is 700 tate: Aggressively Expand and Enhance Our Ennegency Firefighting Water System [July 17, 2019]	Act Now Before It IS Aggressively Expand and Enhance Our Emergency Firefighting Water System [July 17, 2019]	Act Now Before it is Too Late: Too Late: Too Sales: Too Salessively Expand and Enhance Our High-Pressure Frengency Frengehting Water System [July 17, 2019]

Recommendation Response Text	The commitment of sources for specific uses on negative the commitment of sources for specific uses of the infrastructure is the work of the 10-Year Capital Plan. The plan discussed in Recommendation 1 will be acknowledged in the Capital Plan, and based on analysis, will be done on the capital plan in the capital plan may be acknown the capital plan in the capital plan may be acknown the capital plan in the capital plan may be acknown the capital plan in the capital plan across San infrastructure portfolio and across San infrastructure portfolio and across San infrastructure portfolio and across San infrastructure profice challenges, and plan has longstanding funding principles to guide the prioritization of public infrastructure guide the prioritization of public infrastructure preserve assets and promote sustainability; (4) address legal and/or regulatory mandates; (2) ensure public safety and enhance resilience; (3) advance planned and promote sustainability; (4) advance planned and programmatic needs; and (5) promote economic development. In the next Lity-Year Capital Plan and those that follow, the City will continue to analyze priority projects and proferies. Committing to entirely funding a single program out of context and without regard for the trade-offs of that commitment longstanding and highly regarded capital planning process and likely created significant vulnerabilities elsewhere in the portfolio.	Will be implemented Ensuring that San Francisco has the infrastructure and resources to be well prepared to fight firers in all parts of San Francisco is something that will be a focus of the next 10-Year Capital Plan. Per Administrative Code 3.20, that Plan must be submitted to the Nayor and Board no later than March 10 feeth odd.  1. The requested presentation would be delivered as part of that Plan's submission to enable holistic planning across San Francisco's resilience challenges. Update, available on this timeline would be included. The City cannot discuss the project and timeline until the ESER 2020 pain passes, or forthe reson, the City will sync this recommendation with the Cole will some passes.
Recommendation Response (Implementation)	analysis	Will be implemented
Respondent Assigned by CGJ [Response Due Date]	General Manager, San Frankzoo Dublic Utilities Commission [September 15, 2019]	General Manager, San Francisco Public Utilities Commission (September 15, 2019)
Recommendation (text may be duplicated due to spanning and multiple respondent effects)	The plan discussed in Recommendation R1 should including financing sources, for the installation within 15 years of a high-pressure, multi-sourced, years of a high-pressure, multi-sourced besincally abe emergency avaet system for those parts of the City that don't currently have one, i.e., by no later than June 30, 2034.	By no later than December 31, 2020, the Mayor, the SFPUC, the FFD, and the Office of Resilience and Capital Planning should jointly present to the Board of Supervisors a detailed plan to ensure the City is well prepared to fight fires in all parts of San Francisco in the event of a 1906-magnitude (7.8) earthquake.
R# [for F#]	(for F1-F6)	R1 [for F1-F6]
Finding Response Text	The MWSS has been significantly upgraded in the Bast 12 years through the Water Supply I improvement Program (WSP) initiated by the SFPUC. The goals of WSIP included to reduce with underability of the water system to damage from earthquakes and increase overali water system reliability. There were 35 in-city projects system for startegic and one of the largest water by San Francisco, and one of the largest water by San Francisco, and one of the largest water by San Eroncisco, and one of the largest water and strategic infrastructure programs targeted and strategic in	The SFDUC, SFED, and San Francisco Public Works (SFPW) are committed to increasing fire properction throughout San Francisco. Since the passage of the first Earthquake Safety and Emergency Response Bond in 2010, the three agencies have been implementing projects to improve the AWSS system's seismic reliability and range of coverage. Enhancing the AWSS argules the AWSS system of coverage to fall areas of the City would require the allocation of funds to do so. The three agencies will continue to develop and implement projects utilizing new and proven technologies that improve upon the original system design. There have been many davanementals, hydrants, and seismic valves since the early 1900s, and the City intends to use the best possible technology available to meet the performance standards of the SFP.
Finding Response (Agree/Disagree)	Olsagree, partially	Agree with the finding
Respondent Assigned by CGJ [Response Due Date]	General Manager, San Franctson Commission (September 15, 2019)	General Manager, San Francisco Public Utilities Commission [September 15, 2019]
Finding (text may be duplicated due to spanning and multiple respondent effects)	The municipal water supply system (MWSS) is shighly vulnerable to damage from a major earthquake and is not a reliable source for water supply for firefighting after a major earthquake. If	The City's high-pressure emergency water supply system, known as the Auxiliary Water soupply system (wWS), does not cover large parts of Supervisorial Districts 1, 4," and 11, roughly one-third of the City's developed area. As a result, these districts are not adequately protected from fires after a major earthquake.
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Report Title [Publication Date]	Act Now Before it is 780 to 1818. Aggressively Expand and Enhance Our and Enhance Our Enregency Firefighting Water System [July 17, 2019]	Act Now Before it is Too Late: Too Late: Agressively Expand and Enhance Our High-Pressure Firefighting Water System (July 17, 2019)

Recommendation Response Text	The commitment of sources for specific uses on specific melines for San Fandsco's public infrastructure is the work of the 10-Year Capital Plan. The plan discussed in Recommendation 1 will be activated by the state of the 10-Year Capital Plan. The plan discussed in Recommendation 1 will be acknowledged in the Capital Plan and based on analysis, will be done on the capital plan timeline. The capital planning process planted funding for needs across the public infrastructure portfolio and across San Francéos's residinence challenges. The Capital Plan has longstanding funding principles to guide the prioritisation of public infrastructure lusestemes. These investments are thereef. (1) address legal and/or regulatory mandates; (2) ensure public safety and enhance resilience; (3) generor assets and promote sustainability; (4) advance planned and programmant custainability; (4) advance planned and programmant custainability; (4) advance planned and programmant custainability; (4) advance planned and programmant on the next of City will continue to analyte protivy projects and protifices. Capital Plan and those that follow, the City will continue to analyte protivy projects and proticultes. Committing to entirely funding a single program out of context and without regard for the trade-offs of that commitment would be out of step with the City.	Will be implemented Ensuring that San Francisco has the infrastructure and resources to be well prepared to fight fires in all parts of San Francisco is something that will be a focus of the next 10-Year Capital Plan. Per Administrative Code 3.20, that Plan must be submitted to the Mayor and Board no later than March 1 of each oddnumbered year for approval no later than May 1. The requested presentation would be delivered as part of that Plan's submission to enable holisite planing across San Francisco's resilience challenges. Updates available on this timeliene would be included. The City cannot directline would be included. The City cannot directline would be included. The City and some of plan passes. For this reason, the City will sync this recommendation with the Capital Plan, and push back the timeline to December 31, 2021.
Recommendation Response (implementation)	analysis	Will be implemented
Respondent Assigned by CGJ [Response Due Date]	General Manager, San Frandsco Public Utilities (September 15, 2019)	General Manager, San Francisco Public Utilities Commission [September 15, 2019]
Recommendation (text may be duplicated due to spanning and multiple respondent effects)	The plan discussed in Recommendation R1 should including Should net a detailed droposal, including financing sources, for the installation within 15 years of a high-pressure, multi-sourced, seasincilally she emergency absent system for those parts of the city that don't currently have one, i.e., by no later than June 30, 2034.	By no later than December 31, 2020, the Mayor, the SFPUC, the SFPD, and the Office of Resilience and Capital Planning should jointly present to the Board of Supervisors a detailed plann to ensure the City is well prepared to fight fires in all parts of San Fandisco in the event of a 1906-magnitude (7.8) earthquake.
R# [for F#]	[for F1-F6]	[for F1-F6] [
Finding Response Text	The SFPLL, SFPD, and San Francisco Public Works (SFPW) are committed to increasing fire [I protection throughout San Francisco, Since the prostage of the first Earthquake Safety and Emergency Response Bond in 2010, the three agencies where the signal and the AWSS system's seismic reliability improve the AWSS system's seismic reliability and range of coverage. Embarding the AWSS range of coverage to all areas of the City would require the allocation of funds to do so. The tree agencies wall continue to develop and implement projects utiliting new and proven technologies that improve upon the original system design. There have been many advancements in earthquake resistant pipeline design and materials, hydrants, and seismic design and materials, hydrants, and seismic design and materials, hydrants, and seismic design are the best possible technology available to meet the performance standards of the SFFD.	As the City considers what is essential to protect San Francisco, it is important to acknowledge Unutifiable, complex residence challenges. These challenges are documented in the Resilient SF strategy (2016) and underlie the Resilient SF strategy (2016) and underlie the Resilient SF strategy (2016) and underlie the strangele ferfort of our capital investments as represented in the 10-Vea Tapital plan (last updated 2019). These challenges are: Earthquakes, Sea leve Risse/Climate Change, Aging Infrastructure, Unaffordability, and Social innequity. All of these challenges represent meaningful threat bailing raparasis, their property, and their ability to make a life in the city, in making decisions about princity all of these challenges, identify the areas of greatest need across them, and make progress on all fronts simultaneously. The City has taken significant steps since 2010 to ensure that the City has a high-pressure multi-sourced, seismically safe EPWS. Since the passage of the first Earthquake Safety and Energency Response Bond in 2010, SFPUC, SFP Dy SF Public Works have been implementing projects to improve implement projects utiliting new and proven technologies that improve upon the original system design.
Finding Response (Agree/Disagree)	Agree with the finding	Agree with the finding
Respondent Assigned by CGJ [Response Due Date]	General Manager, San Francisco Public Utilities Commission (September 15, 2019)	General Manager, San Francisco Public Utilities Commission (September 15, 2019)
Finding (text may be duplicated due to spanning and multiple respondent effects)	The City's high-pressure ennegancy water supply system (kwom as the Autillary Water Supply System (kwSS), does not cover large parts of Supervisorial Districts 3, 4, 7 and 11, accombly one-hind of the City's developed area. As a result, these districts are not adequately protected from fires after a major earthquake.	A high-pressure, multi-sourced, seismically safe emergency frefighting water supply will be costly but is essential to protect the City.
F#	Z	8
Report Title [Publication Date]	Act Now Before It is Ago Lauer Ago Lauer Ago Lauer And Chance Our And Enhance Our Firefighting Water System (July 17, 2019)	Act Now Before It Is Too Late: Agressively Expand and Embrance Our High-Pressure Emergency Freighting Water System [July 17, 2019]

Recommendation Response Text	The commitment of sources for specific uses on specific finelines (or San Franksozo public infrastructure is the work of the 10-Year Capital Plan. The plan discussed in Recommendation 1 will be absrowledged in the Capital Plan, and based on analysis, will be done on the capital plan timeline. The capital planning process gathers, and balances planned funding for needs across the public infrastructure portfolio and across San Franksozo resilience challenges. The Capital Plan has longstanding funding principles to guide the prioritization of public infrastructure investiments. These investiments are treed: (1) address legal and/or regulatory mandates; (2) ensure public safety and enhance resilience; (3) preserve assets and promote sustainability; (4) advance planned and programmatic needs; and (5) promote economic development. In the next 10-Year Capital Plan and those that follow, the City will continue to analyze priority projects and programs and identify sources to advance those princite. Committing to entirely funding a single program out of context and withmust regard for the trade-oifs of that commitment would be out of step with the City is imple program out of context and withmust would be out of step with the City is	will be implemented Ensuring that San Francisco has the intrastructure and resources to be well prepared to fight fires in all parts of San Francisco is something that will be a focus of the next 10-Year Capital Plan, he a docus of the next 10-Year Capital Plan, he Administrative Code 3.20, that Plan must be submitted to the Mayor and Board no later than March 1 of each odd.  "I'me requested presentation would be delivered as part of that Plan's submission to enable holistic planning across San Francisco's resilience challenges, Lydates, available on this timeline would be included. The City cannot discuss the project and timeline until the ESER 2020 plan passes, co'r this reason, the City will sync this recommendation with the Capital Plan, and push back the timeline to December 31, 2021.
Recommendation Response (Implementation)	analysis	Will be implemented
Respondent Assigned by CGJ [Response Due Date]	General Manager, San Frankzoor buller Utilitles Commission [September 15, 2019]	General Manager, San Francisco Public Utilities Commission [September 15, 2019]
Recommendation (text may be duplicated due to spanning and multiple respondent effects)	The plan discussed in Recommendation R1 should including financing sources, for the installation within 15 years of a high-pressure, multi-sourced, seismically also estimated by water system for those parts of the City that don't currently have one, I.e., by no later than June 30, 2034.	By no later than December 31, 2020, the Mayor, General Manager, San and Captal Planning should jointly present to Commission the Board of Supervisors a detailed plan to lespensor of Supervisors and etailed plan to and parts of San Francisco in the event of a 1906-magnitude (7.8) earthquake.
R# [for F#]	[for F1-F6]	R1 (for F1-F6)
Finding Response Text	As the City considers what is essential to protect as a farancke, of its important to acknowledge our multiple, complex resilience challenges. These challenges are documented in the strategic efforts of our capital investments as represented in the 10-Year Capital Plan (lisst protective filorist of our capital investments as represented in the 10-Year Capital Plan (lisst protective filorist of the 10-Year Capital Plan (lisst protective filorist to the 10-Year Capital Plan (list protective filorist). The challenges are charanalist (lith the capital filorist comust keep an eye on protective in making decisions about priority investments, San Francisco must keep an eye on all of these challenges, identify the areas of greatest need corrost kern, and make progress and all of these challenges, identify the areas of greatest need corrost kern hand make progress and if roms simulaneously. The City has taken significant steps since 2010 to ensure that the first Earthquake Salety and Emergency Response dann in 2016, sperior, 5470, 5760, 57	Decisions about programming and funding levels of future ESRB bands and other complementary sources that could support the expansion of the AWSS have yet to be made.
Finding Response (Agree/Disagree)	Agree with the finding	Disagree, wholly
Respondent Assigned by CGJ [Response Due Date]	General Manager, San Frantscoor Dublic Utilities Commission [September 15, 2019]	General Manager, San Francisco Public Utilities Commission [September 15, 2019]
Finding (text may be duplicated due to spanning and multiple respondent effects)	A high-pressure, multi-sourced, seismically safe emergency frefighting water supply will be costly but is essential to protect the City.	Unless the City increases funding levels, it will be General Manager, Sar several decades; (i.e., after the USGS predicts Francisco Public Utility one or more major earthquases will occur). Commission before the southern parts of the City have a high- (September 15, 2019) pressure, multi-sourced, seismically safe emergency firefighting water supply.
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Report Title [Publication Date]	Act Now Before it is No Late: Aggressively Expand and Enhance Our All-Pressure Emergency Fielelighting Water System [July 17, 2019]	Act Now Before it is Too Jate: Aggressively Expand and Enhance Our High-Pressure Emegency Fireflighting Water System [July 17, 2019]

Recommendation Response Text	The commitment of sources for specific uses on infrastructure is the work of the 10-Year Capital Plan. The plan discussed in Recommendation 1 will be acknowledged in the Capital Plan. and while be acknowledged in the Capital Plan and based on analysis, will be done on the capital planning process planted plan timeline. The capital planning process planted funding for needs across the public and across San fractices be resilience, and planters planted funding for needs across the public infrastructure portfolio and across San fractices or senience challenges. The Capital Plan has longstanding funding principles to guide the prioritization of public infrastructure with the prioritization of public infrastructure guide the prioritization of public infrastructure guide the prioritization of public infrastructure and promote sustainability. (4) advance planned and promote resilience; (3) promote economic development. In the next (5) promote economic development, in the next (5) promote economic development in the next (5) promote economic development in the next (5) promote economic development in the next (6) promote economic development in the next regard for the trade-offs of that commitment would be out of stop with the (city/s) mornities. Commitment would be out of stop with the (city/s) implining process and likely regarded capital planning process	30, 2021.	30, 2021.
Recommendation Response (implementation)	Requires further The con analysis a private in practific participant of plan the program of the plan t	Will be implemented SFPUC an 30, 2021.	Will be implemented SFPUC an 39, 2021.
Respondent Assigned by CGJ (Response Due Date)	General Manager, San Re Frandisco Public Utilities an Commission (September 15, 2019)	General Manager, San Francisco Public Utilites Commission [September 15, 2019]	General Manager, San Francisco Public Utilities Commission [September 15, 2019]
Recommendation (text may be duplicated due to spanning and multiple respondent effects)	The plan discussed in Recommendation R1 formulation of the development of the development of the discussion one, i.e., by no later than June 30, 2034.	The SFPUC, the SFFD and the SF Department of the Environment should study adding salt-water by pump stations to Improve the redundancy of the ars sources, especially on the west side. I flandings and recommendations from this study should be presented to the Board of Supervisors by no later than June 30, 2021.	The SFPUC, the SFFD and the SF Department of the Environment should study adding salt-water purp stations to improve the redundancy of water sources, especially on the west side. Findings and recommendations from this study should be presented to the Board of Supervisors by no later than June 30, 2021.
R# [for F#]	[for F1-F6]	[for F8-F9]	[for F8-49]
Finding Response Text	Decisions abour programming and funding levels for future ESR burds and other complementary [Sources that could support the expansion of the AWSS have yet to be made.		While it is true that the SFPUC and SFFD are studying four potential water sources proposed I studying four potential water sources proposed I studying four potential water sources proposed State are not located north of Godden Gate Park, which are not located north of Godden Gate Park, which by no means would reduce the proposed system's resiliency, reliability, performance, or ability to provide abundant high pressure water for fire suppression to the Headmond District after a solatinic event. San Francisco is unique in that there are 11 in-city reservoirs, with a total water capacity of Lake Merced, also located within City Limits, has an approximately 413,000,000 gallons. Additionally, Lake Merced, also located within City Limits, has an additional approximately 2000,000,000 gallons. The potable EPMS system for the Westside of San Francisco that is being developed and analyzed would provide that the mew EFWS pipeline in the Sunset and Richmond Districts could be supplied from four sources of water at two locations. The first two water sources could be supplied for this pump station are Lake Merced. The two sources being studied for this pump station are Lake Appreced. The two sources being studied for this pump station are Lake Appreced. The two sources being studied for this pump station are Lake Regional Water System pipeline. The proposed approximately one billion gallons, and a 60° seismicially resilient SFPUC Hetch Hetchy Regional Water System pipeline. The proposed potable EFWS shot is analyzing the inclusion of a second 300,000 gallons per minite pump station of a second 300,000 gallons per minite pump station
Finding Response (Agree/Disagree)	Disagree, wholly	Agree with the finding	Disagree, partially
Respondent Assigned by CGJ [Response Date]	General Manager, San Franckoc buble Utilities Gommission [September 15, 2019]	General Manager, San Francisco Public Utilities Commission [September 15, 2019]	General Manager, San Francisco Public Utilities Commission [September 15, 2019]
Finding (text may be duplicated due to spanning and multiple respondent effects)	Unless the City increases funding levels, it will be General Manager, San several decades (Le., alternative USGS predicts franciscon bublic Utilition on or more major earthquakes will occur) Commission before the southern parts of the City have a high September 15, 2019) pressure, multi-sourced, seismically safe emergency firelighting water supply.	Redundancy is an important leature of an emergency firefighting water system.	Current plans to extend protections to the western part of the City do not include any high- is pressure water sources north of Golden Gate Park.
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Report Title [Publication Date]	Act Now Before it is Aggressively Expand Aggressively Expand High Expand High Expand Emergency Firefighting Water System (July 37, 2019)	Act Now Before it is Too Late: Aggressively Expand and Enhance Our High-Pressure Femergency Firefighting Water System [July 17, 2019]	Act Now Before it is Aggressively Expand and Enhance Our High-Pressure Emergency Firefighting Water System [July 17, 2019]

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Recommendation Response Text	I SFP UC and SFFD will complete this analysis by June 30, 2021.	
Recommendation Response (implementation)	Will be implemented	
Respondent Assigned by CGJ [Response Due Date]	General Manager, San Franctoor bublic Utilities Commission (September 15, 2019)	
Recommendation (text may be duplicated due to spanning and multiple respondent effects)	The SFPUC should (a) continue its efforts to organize a more detailed analysis of emergency freelighting water needs (including above-the-median needs) by neighborhood, and not just by FAA, and (b) present a completed analysis to the Board of Supervisors by no later than June 30, 2021.	
R# [for F#]	(for F10) (10) (10) (10) (10) (10) (10) (10) (	
Finding Response Text	Fire Response Areas (FRAs) were utilized by SFPUC and SFPO in the planning study CS-199.  This study divided the City into areas based on those defined by the SFPD for initial aiam response and were called fire Response Areas (FRAs). Probable fire demands were developed for each FRA using 1000 eats of fire demands generated by Charles Scawthon. PhD using a Monte Carlo analysis of fire ginitions and fire gent each FRA using 1000 eats of fire demands generated by Charles Scawthon. PhD using a Monte Carlo analysis of fire ginitions and fire ginitions vere generated using methods similar to those used for the Community Action Plan for both series of the Community Action Plan for both Series Safety (CASS) study (ATC 2010). The fire ignitions subsequently were used to develope water demands that were aggregated into the likely fire demands for each FRA. The water roughlies for each FRA were developed using the reliability modeling tool GinsArFE, developed at Cornell University by Professor Thomas 2.  Of Gourke, GilAsFE performs internal Monte Carlo analysis to damage pipes in the system for multiple scenarios. The water supplies for each FRA, as usunded how other from the City's municipal assumed no water from the City's municipal assumed no water from the City's municipal assumed no water from the City's municipal econsevative and highly unifiely even after a selmnic event. The reliability score for each FRA	The EFWS was built after the 1306 earthquake, and its location of San Fandisco, corresponds to the northeast portion of San Fandisco, corresponds to the location of the majority of the city's population at hat time. Since 2010, the SPEIC, SFED, and Public Works have made critical improvements to the existing EFWS system. Expanding the EFWS prior to ensuring that the existing EFWS is explicitly and reliable would have contradicted best engineering practices. The SFPUC and SFED exts are developing plans that vould implement a resilient, nobust, and redundant potable EFWS for the Westside of San Francisco. The potable feWS for the Westside of San Francisco. The potable feWS for the Westside of San Francisco. The potable would propose the best method for brighing a robust and resilient high-pressure firefighting water to the SFED firefighters at the high-pressure for the SFED firefighters to combat large fires after a seismic event, and is linkly to be supplied by four water sources. The SFPUC and SFPO spotable EFWS is being designed in a manner that allows for agility and the flexibility to add now tendologies and water sources, and in a manner that allows the piping network to be extended in the future to serve additional areas.
Finding Response (Agree/Disagree)	Disagree, partially	Disagree, partially
Respondent Assigned by CGJ [Response Due Date]	51	General Manager, San Fanatso bublic Utilities Commission (September 15, 2019)
Finding (text may be duplicated due to spanning and multiple respondent effects)	The "reliability scores" being used by the SFP UC impart an overty optimistic impression of the protection provided.	The City does not have a timeline to fund and complete development of a ligh pressure, multi-sourced, selsmically safe emergency water supply for all parts of the City, including poor medigiborhoods that historically have not been as well protected as the downtown business district and many richer neighborhoods.
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Report Title [Publication Date]	Act Now Before It is Aggressively Expand and Enhance Our and Enhance Our Enregence Firefighting Water System (July 17, 2019)	Act Now Before It Is Aggressively Expand and Enhance Our and Enhance Our Firefighting Water System (July 17, 2019)

Recommendation Response Text	(a) SFPUC implements "best practices" for the maintenance of NAVS assest in collaboration with SFD, and consistent with the terms of the Memorandum of Understanding Regarding Operation and Maintenance of San Francisco Departion and Maintenance of San Francisco Water Suppression (MOU), SFPUC will seek SFPD's wither a pproval for "any modifications that could compromise" the system's function as a high pressure freifighting system (MOU, page 2). (I) NA AMSS Critical valves have been identified and will the exercised every year through the AWSS Critical Valve Exercise Program.	the MOU by June 30, 2020.
Recommendation Response (implementation)	implemented	Will be implemented
Respondent Assigned by CGJ (Response Due Date)	General Manager, San Frandisco Public Utilities Commission [September 15, 2019]	General Manager, San Francisco Public Utilities Commission [September 15, 2019]
Recommendation (text may be duplicated due to spanning and multiple respondent effects)	by no later than December 31, 2020 the SFP UC, with the advisoral of with the advisoral of the SFD, should (a) Implement "Dets practices" for the maintenance of AWSS assets, and (b) recedefine whith AWSS values in the system are "critical," and, therefore, require more attention and priority in the SFP UC's maintenance plans.	By no later than June 30, 2020, the 2015 MOU between the SFPUC and the SFP Should be amended to include a detailed readmap for amnual emergency response exercises, including simulated disaster and earthquake drills involving the AWSS and the PWSS.
R# [for F#]	[for F12]	(for F13)
Finding Response Text	Since taking over maintenance responsibilities, 29.02 th as completed significant maintenance activities. For example, on a monthly basis, staff from the SFPUC test both Pump Station #1 and from the SFPUC test both Pump Station #1 and from the SFPUC test both Pump Station #1 and from the SFPUC test both Pump Station #1 and recommended in the CS-199 study as stoken below in Table 7-1 from CS-199. The SFPUC has developed several for it routine maintenance plans recommended in the report of has determined the recommendation 1. Confirm that administenance Recommendation 2. Lop Task Maintenance Recommendation 2. Perform Regular maintenance Recommendation 2. Perform Regular maintenance and testing to sockies regular maintenance and testing is performed in accordance with maintenance plans.  Maintenance Recommendation 3. Check, flush maintenance with maintenance plans.	There are no formal protocol outlining specific pions AWSS exercises or drills in the MOU; however, there are multiple opportunities to train together during operation, maintenance, and construction of improvement projects for the AWSS facilities as previously described in the response to the Grand Juny questions sent in May 2019.  The SFFD and SFPUC have had multiple field training opportunities during the maintenance and star-up tenting of AWSS facilities in the last SYFD and SFPUC personnel conducted training opportunities during procedures for years. For example, son December 20, 2018, SFPUC and SFFD performed joint-department full-scale test of AWSS flump Station No. 1 (FS1) including pumping sawater into an isolated section of the AWSS distribution through system hydrants. On August 29, 2018, SFPUC, SFFD and DPW personnel conducted a sewater fracilities to assure systems are in good working order, and for to train personnel on operations and joint-obstances are an earny searches, and joint-obstances are an earny searches, and joint-obstances are an earny searches, and joint-obstances are in good working order, and its train personnel on operations and joint-obstances are performed between SFFD and SFPUC, staff in January 2016
Finding Response (Agree/Disagree)	Disagree, wholly	Disagree, partially
Respondent Assigned by CGJ [Response Due Date]	General Manager, San Francisco Public Utilities Commission (September 15, 2019)	General Manager, San Francisco Public Utilitles Commission [September 15, 2019]
Finding (text may be duplicated due to spanning and multiple respondent effects)	The SFPUC has not developed a number of the toutive maintenance plans recommended in a 2014 report (CS-199), and has not adequately defined which AWSS valves are "critical" and therefore require increased attention.	In the 2015 MOU between the SFFD and the SFPUC, the two agencies agreed to conduct joint AVST trainings annually, but there is no formal protocol outlining specific joint AWSS exercises or drills using hypothetical disaster scenarios, such as a major earthquake.
<b>a</b>	F12	F13
Report Title [Publication Date]	Act Now Before It Is 7 to clate: 7 to clate: 7 and Enhance Our 7 and Enhance Our 7 friefighting Water 5 yestem 7 july 17, 2019]	Act Now Before it is Aggressively Expand and Enhance Our High-Pressure Emergency Firefighting Water System [July 17, 2019]

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Recommendation Response Text	Innauring that San Francisco has the infrastructure and resources to be well prepared to fight fires in all parts of San Francisco is something that will be a focus of the next 10-year-Gapial Plane. Per Administrative Code 3.20, that Plan must be submitted to the Mayor and Board no iater than March 1 of each odd-mumbered year for approval no later than May 1. The requested presentation would be delivered as part of that Plan's submission to enable holistic planning across San Francisco's resilience challenges. Updates available on this timeline would be included. The City cannot discuss the project and timeline until the ESER S200 pela passes. To this reason, the City wall sync this recommendation with the Capital Plan, and push back the timeline to December 31, 2021.	The commitment of sources for specific uses on specific timelines for San Fancisco's public infrastructure is the work of the 10-Year Capital Plan. The plan discussed in Recommendation I will be acknowledged in the Capital Plan, and based on analysis, will be done on the capital plan, and based on analysis, will be done on the capital plan inneline. The capital planning process gathers, documents, and balances planned funding for needs across the public infrastructure portfolio and across San Francisco's resilience challenges. The Capital Plan has longstanding funding principles to guide the prioritization of public infrastructure investments. These investments are tieres' (1) advances baland and enhance resilience; 2) ensure public safety and enhance restlience; 3) advance planned and programmatic needs: (2) ensure public safety and enhance restlience; (3) advance planned and programmatic needs: (2) promote economic development. In the next (5) promote economic development, in the next (6) promote economic development, in the city single program out of context and without regard for the trade-offs of that commitment would be out of step with the City's longstanding and highly regarded capital planning process and likely create significant vulnerabilities elsewhere in the portfolio.	I Ensuring that San Francisco has the infrastructure and resources to be well prepared to fight fires in all parts of San Francisco is something that will be a focus of the next 10. Year Capital Plan. Per Administrative Code 3.20, Has Plan must be submitted to the Mayor and Board no later than March 1 of each odd-numbered year for approval no later than May I. The requested presentation would be delivered as part of that Plan's submission to enable holistic planning across San Francisco's resilience challenges. Updates available on this timeline would be included. The City cannot discuss the project and timeline until the ESER SCOS plan passes. For this reason, the City will sync this recommendation with the Capital Plan, and push back the timeline to December 31, 2021.
Recommendation Response (Implementation)	Will be implemented	analysis	Will be implemented
Respondent Assigned by CGJ [Response Due Date]	Chiel, San Francisco Fire Department [September 15, 2019]	Chief, San Francisco Fire Department [September 15, 2019]	Chief, San Francisco Fire Department [September 15, 2019]
Recommendation (text may be duplicated due to spanning and multiple respondent effects)	by no fater than December 31, 2020, the Mayor, the 8FPUC, the 8FPD, and the Office of Resiltence and Capital Planning should jointly present to the Board of Supervisors a detailed plan to the Board of Supervisors a detailed plan to all parts of San Francisco in the event of a 1906-magnitude (7.8) earthquake.	The plan discussed in Recommendation R1 should including financial middle a detailed proposal, including financial gaucres, for the installation within 15 years of a high-pressure, multi-sourced, seismically safe emergency water system for those parts of the City that don't currently have one, i.e., by no later than June 30, 2034.	By no later than December 31, 2020, the Mayor, the SFPUC, the SFFD, and the Office of Resilience and Capital Panining should printly present to the Board of Supervisors a detailed plan to ensure the City is well prepared to fight fires in all parts of San Francisco in the event of a 1906-magnitude (7.8) earthquake.
R# [for F#]	R1 [for F1-F6]	(for F1-F6)	R1 [for F1.F6]
Finding Response Text			The MWSS has been significantly upgraded in the last 15 years through the Water Supply improvement Program WWSIP) initiated by the SFPUC. The goals of WSIP included to reduce vulnerability of the water system to damage from earthquasks and increase overall water system reliability. There were 35 incrity projects within the 54.8 billion-dollar program. The WSIP was the largest capital program ever undertaken by San Francisco, and one of the largest water infrastructure programs in the nation. Additionally, it is one of the only comprehensive and strategic infrastructure programs targeted specifically at improving a water system's seismic reliability and resiliency. Additionally, it is unique because the WSIP utilited a 7.8 magnitude earthquake as its seismic Level of Service.
Finding Response (Agree/Disagree)	Agree with the finding	Agree with the finding	Disagree, partially
Respondent Assigned by CGJ [Response Due Date]	Chelt San Francisco Fire	Chef, San Francisco Fire	Chief, San Francisco Fire Department [September 15, 2019]
Finding (text may be duplicated due to spanning and multiple respondent effects)	Fires resulting from an earthquake represent a significant risk of widespread damage and potential loss of life in San Francisco.	Fires resulting from an earthquake represent a significant risk of widespread damage and potential loss of life in San Francisco.	The municipal water supply system (NWNSS) is highly vulnerable to damage from a major earthquake and is not a reliable source for water supply for firefighting after a major earthquake.
#	æ .	1	F2
Report Title [Publication Date]	Act Now Before it is Too Late. Too Late Expand and Enhance Our High-Pressure Emergency Firefighting Water System [July 17, 2019]	Act Now Before it is Too Late: Aggressively Expand and Enhance Our High-Pressure Emergency Firefighting Water System [July 17, 2019]	Act Now Before It is Too Late: Aggressively Expand and Enhance Our High-Pressure Freefighting Water System [July 17, 2019]

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Recommendation Response Text	The commitment of sources for specific uses on specific finelines of San Fasters of Specific finelines of San Fasters of Sublic infrastructure is the work of the 10-Year Capital Plan. The plan discussed in Recommendation 1 with the action of the sapital Plan. The plan discussed in Recommendation 1 with the action of the capital planning process partics, documents, and balances planned plan timeline. The capital planning process afters, documents, and balances planned funding for needs across the public infrastructure portfolio and across San Farancisco's resilience challegues. The Capital Plan has longstanding funding principles to guide the prioritization of public infrastructure livestments. These investments are thereel: (13) address legal and/or regulatory mandates; (2) ensure public safety and enhance resilience; (3) ensure public safety and enhance resilience; (3) advance planned and programmatic redgs; and (5) promote economic development. In the next 10-Year Capital Plan and those that foliow, the City will continue to analyte priority promiting and program and identify sources to advance those provide be out of step with the City's inough en out of step with the City's inough be not it step with the City's inough en out of step with the City's inough en out	Will be implemented Ensuring that San Francisco has the infrastructure and resources to be well prepared to fight fires in all parts of San Francisco is something that will be a focus of the next 10-Year Capital Plan. Per Administrative Code 3.20, that Plan must be submitted to the Mayor and Board no later than March 1 of each odd-numbered year for approval no later than May 1. The requested presentation would be delivered as part of that Plan's submission to reallience day and of that Plan's submission to resilience challenges. Updates available on this timeline would be included. The City camp discuss the project and timeline until the ESE discuss the project and timeline until the ESE days of this reason, the City will sync this recommendation with the Capital Plan, and push back the timeline to December 31, 2021.
Recommendation Response (Implementation)	analysis	Will be implemented
Respondent Assigned by CGJ [Response Due Date]	Chief, San Francisco Fire Department (September 15, 2019)	Chief, San Frandsco Fire Department [September 15, 2019]
Recommendation (text may be duplicated due to spanning and multiple respondent effects)	The plan discussed in Recommendation R1 ffor F1-F6] should include a detailed proposal, including financing sources, for the installation within 15 years of a high-pressure, multi-sourced, seasincially aske emergency water system for those parts of the City that don't currently have one, i.e., by no later than June 30, 2034.	By no later than December 31, 2020, the Mayor, Chief, San Francisco Fire and Capital Planning should jointly present to [September 15, 2019] the Board of Supervisors a detailed plan to ensure the City is well prepared to fight fires in all parts of San Francisco in the event of a 1906-magnitude (7.3) earthquake.
R# [for F#]		R1 (for F1-F6)
Finding Response Text	The MWSS has been significantly upgraded in the last 15 years through the Water Supply improvement Program (WSIP) initiated by the SPUC. The goals of WSIP included to reduce when realishing the water system to damage from earthquakes and increase overall water system reliability. There were 35 in-city projects within the 5.48 billion-dollar program. The WSIP was the largest capital program ever undertaken by San Francisco, and one of the largest water has transitive, and one of the largest water by San Francisco, and one of the largest water has strangelically at improving a water system? Additionally, it is one of the only comprehensive and strategic infrastructure programs sargeted specifically at improving a water system? selsmic reliability and resiliency. Additionally, it is unique because the WSIP utilized a 7.8 magnitude earthquake as its seismic Level of Service.	Gatems serve as one of many important tools for use by the SFD in response to a disaster. Gatem locations are strategically located in the City in the event of a major conflagration to assist as a "Demarcation Line" on some of The City's najor thoroughfarer, this was realized after the 1906 earthquake. With work accomplished through the ESFR bond program, cisterns have been sestimically improved throughout the City and the overall number of cisterns has increased to approximately 230, providing the Fire Department access to millions of gallons of water in an emergency.
Finding Response (Agree/Disagree)	Disagree, partially	Agree with the finding
Respondent Assigned by CGJ [Response Date]	Oleis, San Francisco Fire Department [September 15, 2019]	Chief, San Francisco Fire Department [September 15, 2019]
Finding (text may be duplicated due to spanning and multiple respondent effects)	The municipal water supply system (MWSS) is lightly vulnerable to damage from a major earthquake and is not a reliable source for water supply for firefighting after a major earthquake.	Approximately 30 cistems have recently been added with funds from ESRB bonds, but cistems only have up to about an houro of water supply and thus do not provide sufficient water for fighting fires following a major earthquake.
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Report Title [Publication Date]	Act Now Before It is Aggressively Espand and Enhance Our Emergency Freelighting Water System [Unly 17, 2019]	Act Now Before it is Too Jale: Aggressively Expand and Enhance Our High-Pressure Firefighting Water System [July 17, 2019]

Recommendation Response Text	The commitment of sources for specific uses on specific trimelies of so as Frantacsor's public infrastructure is the work of the 10-Vear Capital Plan. The plan discussed in Recommendation 1 will be acknowledged in the Capital Plan, and passed on analysis, will be done on the capital plan timeline. The capital planning process gather, scoenness and balances planned funding for needs across the public infrastructure portfolio and across San Frantscots crealinered challenges. The Capital Plan has longstanding funding principles to guide the prioritization of public infrastructure investments. These investments are tereed; (1) address legal and for regulatory mandates; (2) ensure public safety and enhance resilience; (3) preserve assets and promote usushambility; (4) advance planned and programmatic needs; and (5) promote economic development. In the next 10-Year Capital Plan and those that follow, the City will continue to analyze priority projects and programs and identify sources to advance those priority projects and programs and identify sources to advance those priority continue for one of step with the City's longstanding and highly regarded commitment would be out of step with the City's longstanding and highly regarded create significant vulnerabilities elsewhere in the portfolio.	Will be implemented Ensuring that San Francisco has the infrastructure and resources to be well prepared to fight fires in all parts of San Francisco is something that will be a focus of the next 10-Year-Capital Plan. Per Administrative Gode 3.20, that Plan must be submitted to the Mayor and Board no later than March 1 of each odd-numbered year for approval no later than May 1. The requested presentation would be delivered as part of that Plan's submission to enable holistic planning across San Francisco's resilience challenges. Updates available on this timeline would be included. The City cannot discuss the project and timeline until the ESER 2020 plan passes. For this reason, the City will syn this recommendation with the Capital Plan, and push back the timeline to December 31, 2021.
Recommendation Response (implementation)	analysis	Will be implemented
Respondent Assigned by CGJ [Response Due Date]	Chief, San Francisco Fire Department [September 15, 2019]	Chiel, San Francisco Fire Department [September 15, 2019]
Recommendation (text may be duplicated due to spanning and multiple respondent effects)	The plan discussed in Recommendation R1 Abould including Should including Should including Sources, for the installation within 15 years of a high-pressure, multi-sourced, seismically abe emergency water system for those parts of the City, that don't currently have one, i.e., by no later than June 30, 2034.	R1 By no later than December 31, 2020, the Mayor, Chief, San Fr [for F1-F6] the SFPUC, the SFPD, and the Office of Resilience Department and Capital Palming should plointly present to [September the Board of Supervisors a detailed plan to ensure the City is well prepared to fight fires in all parts of San Francisco in the event of a 1906-magnitude (7.8) earthquake.
R# [for F#]	[for F1-F6]	R1 for F1-F6
Finding Response Text	Gisterns serve as one of many important tools for one by the SFPD in response to a disaster. [Gistern locations are strategically located in the City in the event of a major conflagration to assist as a "Demarcation time" or some of The City's major thoroughlares. This was realized after the 1906 earthquake. With work accomplished through the ESR bond program, of sterns have been selsmically improved accomplished through the ESR bond program, of sterns have been selsmically improved cisterns have been selsmically improved cisterns have been selsmically improved of sterns have the exsets du appointment by 230, providing the Fire Department access to millions of gallons of water in an emergency.	The SPDUC, SFPD, and San Francisco Public Works (SPPW) are committed to increasing fire [protection throughout San Francisco. Since the passage of the first Eartquake Safety and Emergency Response Bond in 2010, the three againces have been implementing projects to improve the AWSS system? seismic reliability and range of coverage. Inhancing the AWSS ange of coverage to all areas of the City would require the allocation of funds to do so. The three agendes will continue to develop and implement projects utilizing new and proven freedonolegies that improve upon the original system design. There have been many advancements in earthquake resistant pipeline design and materials, hydrants, and seismic valves since the eart 1900s, and the City intends to use the best possible technology available to meet the performance standards of the 5FPD.
Finding Response (Agree/Disagree)	finding finding	Agree with the finding
Respondent Assigned by CGJ [Response Due Date]	Chlef, San Francisco Fire Department [September 15, 2019]	Chief, San Frandisco Fire Department (September 15, 2019)
Finding (text may be duplicated due to spanning and multiple respondent effects)	Approximately 30 disterns have recently been added with funds from ESES bands, but cisterns only have up to about an hour of water supply and thus do not provide sufficient water for fighting fires following a major earthquake.	The City's high-pressure emergency water supply system, known as the Auxiliary Water Supply System, known as the Auxiliary Water Supply System (AVS), does not cover large parts of Supervisorial Districts 1, 4, 7 and 11, roughly one-third of the City's developed area. As a result, these districts are not adequately protected from fires after a major earthquake.
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Report Title [Pubilcation Date]	Act Now Before It is Too Late: Aggressively Expand and Enhance Our and Enhance Cour Emergency System (July 17, 2019)	Act Now Before it is Too Late: Too Late: Too Late: Algh-Pressure High-Pressure Firefighting Water System [July 17, 2019]

Recommendation Response Text	The commitment of sources for specific usess on medical times of the 10-fear Capital Plan. The plan discussed in Recommendation 1 will be acknowledged in the Capital Plan, and based on analysis, will be done on the capital plan and based on analysis, will be done on the capital plan and plan timeline. The capital planning process plants, documents, and balances planned funding for needs across the public infrastructure portfolio and across San francisco's realisticate cablenges, The Capital Plan has longstanding funding principles to guide the prioritization of public infrastructure opticilis and across and plants sustained; (1) address legal and/or regulatory mandates; (2) ansure public safety and enhance resilience; (3) anderes see invastments are tereed; (1) address legal and/or regulatory mandates; (2) ensure public safety and enhance resilience; (3) and promote sustainability; (4) advance planned and promote sustainability; (4) advance planned and programmatic needs; and programs and identify sources to advance those program out of context and without regard for the trade-off so that commitment would be out of step with the city's longstanding and highly regarded capital planning process and likely regarded capital planning and highly regarded capital planning and highly regarded capital plan	Will be implemented The Department is currently finalizing specifications for these units, after which they will go out to bit furwough the City procurement processes before construction. It is anticipated the Department will take receipt of these units in the second half (1202) carry 2021. These hose tenders are abrav-duty apparatus designed to be able to be deployed and moved throughout the City depending on need, giving the Department needed operational flexibility in its response.
Recommendation Response (implementation)	analysis	Will be implemented
Respondent Assigned by CGJ [Response Due Date]	Chief, San Francisco Fire Department [September 15, 2019]	Chief, San Francisco Fire Department [September 15, 2019]
Recommendation (text may be duplicated due to spanning and multiple respondent effects)	The plan discussed in Recommendation R1 Aboud include a defailed proposal, including financing sources, for the installation within 15 years of a high-pressure, multi-sourced, years of a high-pressure, multi-sourced, tessimically abe emergency water system for those parts of the City, that don't currently have one, i.e., by no later than June 30, 2034.	The SFFD should strategically locate the majority Chief, San Francisco Fire of the PW/SS hose tenders in areas that at present only have low-pressure hydrants and/or [September 15, 2019] cistems.
R# [for F#]	(for F1-F6)	[for F4]
	The SFPUC, SFFD, and San Francisco Public Works (SFPW) are committed to increasing fire protection throughout San Francisco, Since the passage of the first Earthquake Safety and Emergency Response Bond in 2010, the three agencies have been implementing projects to improve the AWSS system's seismic reliability and range of coverage. Enhancing the AWSS range of coverage to all areas of the City would require the allocation of funds to do so. The three agencies wall continue to develop and implement projects utiliting new and proven the agencies wall continue to develop and implement projects utiliting new and proven thereagned earth some three agencies and incontinue the neighbor state design. There have been many advancements in earthquake resistant pipeline design and materials, hydrants, and seismic valves since the earty 1900s, and the City intends to use the best possible technology available to meet the performance standards of the SFFD.	The SFPUC, SFPD, and San Francisco Public Works (SFPW) are committed to increasing fire protection throughout San Francisco. Since the passage of the first Earthquake Safety and Emergency Response Bond in 2010, the three agencies have been implementing projects to improve the AWSS system's seismic reliability and range of coverage. Enhancing the AWSS range of coverage to all crass of the City would require the allocation of funds to do so. The three agencies will Continue to develop and implement projects utilizing new and proven technologies that improve upon the original system design. There have been many advancements in earthquake resistant pipeline design and materials, hydrants, and seismic walves since the early 1300s, and the City intends to use the best possible technology available to meet the performance standards of the SFPD.
Finding Response (Agree/Disagree)	finding	Agree with the finding
Respondent Assigned by CGJ [Response Due Date]	Chlef, San Francisco Fire Department  September 15, 2019	Chlef, San Francisco Fire Department [September 15, 2019]
Finding (text may be duplicated due to spanning and multiple respondent effects)	The City's high-pressure emergency water supply system (Awas), does not cover large parts of Superior (Awas), does not cover large parts of Superiorial Districts 1, 4, 7 and 11, coughly one-tild of the City's developed area. As a result, these districts are not adequately protected from fires after a major earthquake.	The City's high-pressure emergency water supply system, known as the Audilary Water Supply System (AWSS), does not cover large parts of Supervisorial Districts 1, 4, 7 and 11, coughly one-third of the City's developed area. As a result, these districts are not adequately protected from fires after a major earthquake.
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Report Title [Publication Date]	act Now Before It is Too Last Now Before It is Agressivet: Before Our High-Pressure Emergency Emergency Frieflighting Water System (July 17, 2019)	Act Now Before it is Aggressively Expand and Enhance Our All play-Pressure Emergency Firefighting Water System [July 17, 2019]

Recommendation  Refer may be duplicated due to spanning and [for F#] text may be duplicated due to spanning and multiple respondent effects)	ial to protect  R1  By no later than December 31, 2020, the Mayor, mowedge  If or F-F-G is the SPPOC, the SPPD, and the Office of Reallence and Capital Planning should jointly present to the Board of Supervisors a detailed plan to the Board of Supervisors and Capital Planning should jointly present to all file in the research in the Board of San Fancisco in the event of a 1906-and state of the Board of San Fancisco in the event of a 1906-and state of the Board of San Fancisco in the event of a 1906-and state of the Board of San Fancisco in the event of a 1906-and state of the Board of San Fancisco in the event of a 1906-and state of the Board of San Fancisco in the event of a 1906-and state of the Board of San Fancisco in the event of a 1906-and state of the Board of San Fancisco in the event of a 1906-and state of the Board of San Fancisco in the event of a 1906-and state of the Board of San Fancisco in the event of a 1906-and state of the Board of San Fancisco in the event of a 1906-and state of the Board of San Fancisco in the event of a 1906-and state of the Board of San Fancisco in the event of a 1906-and state of the Board of San Fancisco in the Event of San Fancisco in the Event of San Fancisco in the San Fancisco in the Event of San Fancisco in t	ial to protect R2 The plan discussed in Recommendation R1 nowleege [for F4-F6] should include a detalled proposal, including liflenges. In the manning sources, for the installation within 15 years of a high-pressure, multi-source, trinents as those parts of the City that don't currently have part so the City that don't currently have pare so one, i.e., by no later than June 30, 2034. It is a life in the life has taken to the city that the cethat t
onse ree)	As the City considers what is essential to protect San Francisco, it is important to acknowledge our multiple, complex resiliente ethallenges.  These challenges are documented in the Resilient St strategic (2016) and underlier the strategic efforts of our capital investments as presented in the 10-Year Capital Plan (last updated 2019). These challenges are: Earthquakes, Sea Leve Hise/Glimate Change, Aging infrastructure, Unaffordability, and Social intequity, all of these challenges represent meaningful threats to San Franciscans, their property, and their ability to make a life in the city. In making decisions about priority investments, San Francisco, and make progress on all of these challenges, identify the areas of greatest need across them, and make progress on all fronts simultaneously. The City has taken colly to ensure that the City has a high-pressure multi-sourced, selemically safe EPWS, Since the passage of the first Earthquake Safety and Emergency Response Bond in 2010, SPEUG, SPEP, SPE PUBLIK, works have been implementing projects to improve the system's selsinic reliability and range of coverage. The three agencies will continue to implement projects unitting new and proven technologies that improve upon the original system design.	As the City considers what is essential to protect San Francisco, it is important to acknowledge or urmulithe, complex residience challenges. These challenges are documented in the Resilient SF strategy (2016) and underlie the strategic efforts of our capital investments as represented in the 10-rear Capital Plan (last updated 2019). These challenges are: Earthquakes, Sea Leve Riske/Climae Change, Aging infrastructure, Unaffordability, and Social inrequity. All of these challenges represent meaningful threats to San Franciscans, their property, and their ability to make a life in the city, in making decisions about priority investments. San Francisco must keep an eye on all of these challenges, identify the areas of greatest need across them, and make progress on all fronts simultaneously. The City has taken significant steps since 2010 to ensure that the City has a high-pressure multiscourced, seismically safe EFWS. Since the passage of the first Earthquake Safety and Emergency Response Bond in 2010, SFPUC, SFFD, SF Public Works have been implementing projects to improve the system's seismic reliability and range of coverage. The three agencies will continue to implement projects utiling new and proven technologies that improve upon the original system design.
φ _	Chief, San Francisco Fire Department [September 15, 2019] [September 15, 2019]	Chief, San Francisco Fire Agree with the Department [September 15, 2019]
	A high-pressure, multi-sourced, seimically safe of emergency firefighting water supply will be D costly but is essential to protect the City.	A high-pressure, multi-sourced, selemically safe G emergency frelighting water supply will be D costly but is essential to protect the City.
	Act Now Before It is  Aggressively Expand and Enhance Our High-Pressure Finerighting Water System (July 17, 2019)	Act Now Before It Is Too Late: Aggressively Expand Adgressively England High-Pressure Energency System (July 17, 2019)

Recommendation Response Text	I finsuring that San Francisco has the infrastructure and resources to be well prepared to fight fires; in all parts of San Francisco is something that will be a focus of the next 10-Year Capital Panh. Ext Administrative Code 3.20, that Plan must be submitted to the Mayor and Board no later than March 1.0 feach odd-numbered year for approval no later than May 1. The requested presentation would be delivered as part of that Plar's submission to enable holistic planning across San Francisco's resilience challenges. Updates available on this timeline would be included. The City cannot discuss the project and timeline until the ESER 2020 plan passes. For this reason, the City will sync this recommendation with the Capital Plan, and push back the timeline to December 31, 2021.	The commitment of sources for specific uses on specific tunifiers for San Francisco's public infrastructure is the work of the 10 Year Capital Plan. The plan discussed in Recommendation 1 will be acknowledged in the Capital Plan, and based on analysis, will be done on the capital plan timeline. The capital planning process gathers, documents, and balances planned funding for needs across the public infrastructure portfolio and across San Francisco's resilience capitaling principles to guide the prioritization of public infrastructure investments. These investments are tiered; (1) alban has longstanding funding principles to guide the prioritization of public infrastructure investments. These investments are tiered; (1) address legal and/or regulatory mandates; (2) ensure public safety and enhance resilience; (3) preserve assets and promote sustainability; (4) address legal and/or regulatory mandates; (1) promote economic development. In the next 10-Year Capital Plan and those that follow, the City will continue to analyze priority projects and programs and identify sources to advance those princips rockers and identify sources to advance those princips rockers and identify sources to advance those princips rockers and identify regarded capital planning process and likely regarded capital planning process and likely regarded capital planning process and likely create significant vulnerabilities elsewhere in the portfolio.	The Fire Department has been allocated funding to purchase five units through funds from the PF13-20 City budges and an allocation from the ST31er. The Department is currently working with the Oifice of Contract Administration to develop a multi-year term contract for hose tenders so in future years, the Department will be able to reduce the amount of time for procurement of the appearus. Each nose tender cost 51 million acach, and we need to weigh purchase of additional hose tenders to other budget request and princity.
Recommendation Response (Implementation)	Will be implemented	analysis	analysis analysis
Respondent Assigned by CGJ [Response Due Date]	Chief, San Francisco Fire Department [September 15, 2019]	Chief, San Francisco Fire Department (September 15, 2019)	Chlef, San Francisco Fire Department [September 15, 2019]
Recommendation (text may be duplicated due to spanning and multiple respondent effects)	by no later than December 31, 2020, the Mayor, Res Pluc, fire SFPD, and the Office of Resilience and Capital Planning should jointly present to the Board of Supervisors a detailed plan to the Board of Supervisors a detailed plan to all parts of San Francisco in the event of a 1905-magnitude (7.8) earthquake.	The plan discussed in Recommendation R1 should include a detailed proposal, including financing sources, for the installation within 15 years of a high-pressure, multi-sourced, seismically side emergency water system for those parts of the City that don't currently have one, i.e., by no later than June 30, 2034.	As interim measure, by no later than June 30, 2021, the City should purchase the 20 new PWSS base tenders being requested by the SFD, to replace and expand its currently inadequate inventory.
R# [for F#]	(for F1-F6) to	(for F1-F6)	[for F6-F7]
Finding Response Text	Decisions about programming and funding levels future ESS thords and other complementary if sources that could support the expansion of the AWSS have yet to be made.	Decisions about programming and funding levels for future ESR Brutue ESR Brutue ESR Brutue ESR Brutue ESR Brutue ESR Brutue ESR Brutues that could support the expansion of the AWSS have yet to be made.	Decisions about programming and funding levels of future ESER bonds and other complementary [sources that could support the expansion of the AWSS have yet to be made.
Finding Response (Agree/Disagree)	Disagree, wholly	Disagree, wholly	Disagree, wholly
Respondent Assigned by CGJ [Response Due Date]	Chief, San Francisco Fire Department [September 15, 2019]	Chief, San Francisco Fire Department (September 15, 2019)	Chief, San Francisco Fire Department (September 15, 2019)
Finding (text may be duplicated due to spanning and multiple respondent effects)	Unless the City increases funding levels, it will be several decaded (it., after the USGS predicts one or more major eartiquakes will occur) before the southern parts of the City have a high- pressure, multi-sourced, seismically, safe emergency freefighting water supply.	Unless the City increases funding levels, it will be several decades (i.e., after the USGS predicts one or more major earthquakes will occur) before the southern parts of the City have a high-pressure, mult-sourced, seismically safe emergency firefightling water supply.	Unless the City increases funding levels, it will be several decades (i.e., after the USGS predicts one or more mappe earthquakes will occur) before the southern parts of the City have a high-pressure, multi-sourced, selsmically, safe emergency firefighting water supply.
#	25	22	9
Report Title [Publication Date]	Act Now Before it is 7 Regressively Expand and Enhance Our and Enhance Our Emergency Firefighting Water 5/system [July 17, 2019]	Act Now Before It is Aggressively Expand and Enhance Our Emergency Firefighting Water System [July 17, 2019]	Act Now Before it Is Too Late: Aggressively Expand and Enhance Our High-Pressure Emergency Firefighting Water System [July 17, 2019]

Recommendation Response Text	The Fire Department has been allocated funding propriates five units through funds from the PY19-20 City budget and an allocation from the State. The Department is currently working with the Office of Contract Administration to develop a multi-year term contract for hose tenders so in the case that additional funding is secured in future years, the Department will be able to the deet the amount of time for procurement of the apparatus. Each hose tender cost \$1 million each, and we need to weigh purchase of additional hose tenders to other budget request and priority.	SFPUC and SFFD will complete this study by June 30, 2021.	30, 2021.
Recommendation Response (Implementation)	analysis	Will be implemented	Will be Implemented
Respondent Assigned by CGJ [Response Due Date]	Chief, San Francisco Fre Department [September 15, 2019]	Chlef, San Francisco Fire Department [September 15, 2019]	Chief, San Francisco Fire Department [September 15, 2019]
Recommendation (text may be duplicated due to spanning and multiple respondent effects)	As interim measure, by no later than June 30, 20, 20, the City should purchase the 20 new PWSS has tenders being requested by the 5FP, to replace and expand its currently inadequate inventory.	The SFPUC, the SFFD and the SF Department of the Environment should study adding salt-water pump stations to improve the redundancy of para source, septically on the west side. Findings and recommendations from this study should be presented to the Board of Supervisors by no later than June 30, 2021.	The SFPUC, the SFFD and the SF Department of the Environment should studing sall-water purpose the redungs as all-water purpose the redunds of water sources, especially on the west side. Findings and recommendations from this study should be presented to the Board of Supervisors by no later than June 30, 2021.
R# [for F#]	[for F6-77] X	R6 [for F8-F9]	[for F8-19]
Finding Response Text	The Fire Department has been allocated funding propurbase five units through funds from the State. While the Department currently has five loader hose tenders spread-out throughout the City, these new units are much more modern and provide the Department with a number of operational benefits, including the following: the capability of pumping and draiting water from any water source; extending the current AWAS system infrastructure; carrying 6,000 feet of hose for deployment; a 5,000 gallon per minute (GRM) on-board water pump; and a 3,000 GRM portable submersible water pump; on-board windrout with a 525 foot readal, and four wheel drive. In addition, the Department has been successful in advocating and receiving Federal flamp than the state of the following values of will continue to advocate for alternative sources of funding to increase the inventory of PWSS equipment.		While It is true that the SFPUC and SFFD are audiving four prental water sources proposed to supply a potable EWS on the west side of the City, which are not located north of Golden Gate Park, which by no means would reduce the proposed system's resiliency, reliability, performance, or ability to provide abundan high pressure water for fire suppression to the Richmond District after a seismic event. San Francisco is unique in that there are 11 in-clity reservoirs, with a total water capacity of approximately 413,000,000 gallons. Additionally, Lake Merced, also located within City Limits, has an additional approximately 1,000,000,000 gallons, person of the Westside of San Francisco that is being developed and analyzed would provide that the new EWS ppieline in the Sunset and Richmond Districts could be supplied from four sources of water at two locations. The first two water sources could be supplied from to the EFWS pipeline via a 30,000 gallon per minute pump station in the wichity of Lake Merced. The two sources Herced, which has a water supply of approximately resilient SFPUC Hetch Hetchy degonal Water System pipeline. The proposed porable EPWS sios is analyzing the inclision of a second 30,000 gallons per minute pump station
Finding Response (Agree/Disagree)	Agree with the finding	Agree with the finding	Disagree, partially
Respondent Assigned by CGJ [Response Due Date]	Chief, San Francisco Fire Department [September 15, 2019]	Chief, San Francisco Fire Department (September 15, 2019)	Chief, San Francisco Fire Department [September 15, 2019]
Finding (text may be duplicated due to spanning and multiple respondent effects)	The existing Portable Water Supply System (MySS) Inventory is inadequate. Investing in more PWSS) hose tenders would provide a relatively quick, cost-effective interim means to improve protection of the southern and wastem parts of the City until a high-pressure, multisourced, seismically safe emergency water supply can be developed in those areas.	Redundancy is an important leature of an emergency firefighting water system.	Gurrent plans to extend protections to the western part of the City do not include any high-pressure water sources north of Golden Gate Park.
#	24	82	<u>ε</u>
Report Title [Publication Date]	Act Now Before it is Too Late: Too Late: Too Late: And Enhance Our and Enhance Our Firefighting Water System [July 17, 2019]	Act Now Before it is Too Late: Aggressively Expand and Enhance Our High-Pressure Emergency Frefighting Water System [July 17, 2019]	Act Now Before it is Aggressively Expan And Enhance Our High-Pressure Firefighting Water 5/system [July 17, 2019]

	Ac	
Recommendation Response Text	Will be implemented   SFPUC and SFFD will complete this analysis by June 30, 2021.	
Recommendation Response (Implementation)	Will be implemented	
Respondent Assigned by CGJ [Response Due Date]	Chief, San Francisco Fire Department [September 15, 2019]	
Recommendation (text may be duplicated due to spanning and multiple respondent effects)	The SFPUC should (a) continue its efforts to organize a morpete a more detailed analysis of emergency freelighting water needs (including above-the-median needs) by neighborhood, and not just by FAA, and (b) present a completed analysis to the Board of Supervisors by no later than June 30, 2021.	
R# [for F#]	(for F10)	
Finding Response Text	FIFE RESPONSE Areas (FRAs) were utilized by FFPC and SFPO in the planning study CCJ.199.  This study divided the City into areas based on those defined by the SFFD for initial alam for each FRA using 1000 sets of fire demands for each FRA using 1000 sets of fire demands generated by Charles Scawthom. PhD using a Monte Carlo analysis of fire ignitions and fire growth using the ground motions from the design earthquake (7.8 magnitude). The fire ignitions subsequently were used to develop to those used for the Community Action Plan for Setsmic Safety (CAPSS) study (FLZ 2010). The fire ignitions subsequently were used to develop water demands that were aggregated into the likely fire demands for each FRA. The water supplies for each FRA were developed as Cornell University by Porfessor Thomas D.  O'Rourke. GIRAFE performs internal Monte Carlo analysis to damage pipes in the system for mutitipal secentarios. The water supplies for each FRA assumed no water from the CIV's municipal water supplies for each FRA, it should be noted that the likely water supplies for each FRA assumed no water from the CIV's municipal water system Mighly unitide year each FRA assumed no water from the CIV's municipal conservative and fighly unitide year each FRA assumed no water from the CIV's municipal conservative and fighly unitide year each FRA self-mine veart. The reliability socie for each FRA self-mine event. The reliability socie for each FRA self-mine vent. The reliability socie of or each FRA self-mine vent. The reliability socie of or each FRA self-mine vent. The reliability socie of each FRA self-mine vent. The reliability socie of or each FRA self-mine vent. The reliability socie of or each FRA self-mine ve	The EFWS was built after the 1906 earthquake, and its location of San Francisco, corresponds to the location of the majority of the city's population at that time, Since 2010, the SPEUC, SFFD, and Public Works have made critical improvements to the existing EFWS system. Expanding the EFWS profit to ensuring that the existing EFWS is resilient, and reliable would have contradicted best engineering practices. The SFPUC and SFFD acts in and reliable would have contradicted best engineering practices. The SFPUC and SFFD are silient, robust, and redundant potable EFWS for the Westside of San Francisco. The potable EWS for the Westside of San Francisco. The potable EWS that its being developed and analyzed would propose the best method for bringing a robust and resilient high-pressure freelighting as resure system to the Western medibochoods in San Francisco that is capable of providing water to the SFFD freelighters at the high-pressure enceded for freilighters at the high-pressure enceded for freilighters to contain stilled in sander that allows the applied and water sources, and SFFD's potable EFWS is being designed in a manner that allows the applied and water sources, and in a manner that allows the piping network to be extended in the future to serve additional areas.
Finding Response (Agree/Disagree)	Disagree, partially	Disagree, partially
Respondent Assigned by CGJ [Response Due Date]	Otiel, Sas Francisco Fire Department [September 15, 2019]	Ohlef, San Francisco Fire Department [September 15, 2019]
	The "reliability scores" being used by the SFPUC impart an overfy optimistic impression of the protection provided.	The City does not have a timeline to fund and complete development of a ligh-pressure, multi-sourced, seismically safe emergency water supply for all parts of the City, including poor meglipochnoods that historically have not been as well protected as the downtown business district and many richer neighborhoods.
#	F10	113
Report Title [Publication Date]	Act Now Before It is Act Now Before It is Aggressively Expand and Enhance Our Mally-Pressure Emergency Firefighting Water System [July 17, 2019]	Act Now Before it is Aggressively Expand and Enhance Our and Enhance Our Firefighting Water System [July 17, 2019]

Recommendation Response Text	will be implemented The Fire Department conducts weekly hose, bloose tender drift start in colarase through companies throughout the City. The Fire Department will work with the SFPUC to have them in attendance and participate in these drills. SFP will also commit to working with the PUC to enhance the scope and frequency of trainings in the future for improved collaboration. SFPD and SFPUC will work together to amend the MOU by June 39, 2020.	(a) SFPUC implements "best practices" for the maintenance of AMS2 sastes in collaboration maintenance of AMS2 sastes in collaboration with SFD, and consistent with the terms of the Memorandum of Understanding Regarding Operation and Waintenance of San Francisco Superession (MOU), SFPUC will seek SFFD's written approval for "any modifications that could compromise" the system (MOU, page 2). (b) The AMSS critical valves have been identified and will be exercised every year through the AMSS critical valve Eversian Program.
Recommendation Response (Implementation)	Will be implemented	Implemented
Respondent Assigned by CGJ [Response Due Date]	Chief, San Francisco Free Department [September 15, 2019]	Chief, San Francisco Fire Department (September 15, 2019)
Recommendation (text may be duplicated due to spanning and multiple respondent effects)	by no later than June 39, 2020, the 2015 MOU between the FFD Should be between the FFD Should be anended to include a detailed roadmap for annual ennegency response exercises, including simulated disaster and anthquake drills involving the AWSS and the PWSS.	By no later than December 31, 2020 the SFPUC, with the advocal of with the advocal of the SFPUC, should (a) implement "best practices" for the maintenance of AWSS assets, and (b) redefine whith AWSS valves in the system are "critical," and, therefore, require more attention and priority in the SFPUC's maintenance plans.
R# [for F#]		R9 [for F12]
Finding Response Text	here are no formal protocol outlining specific joint AWSS exercises or drift in the MOU; however, there are multiple opportunities to rarial together during operation, maintenance, and construction of improvement projects for the AWSS facilities as previously described in the response to the Grand Jury questions sent in May 2019.  The SFD and SFPUC have had multiple field training opportunities during the maintenance and start-up testing of AWSS facilities in the Bats Faraining opportunities during the maintenance and start-up testing of AWSS facilities in the Bats SFPU and SFPU personnel conducted emergency generator start-up procedures for the principle of the AWSS facilities in the Bats Faraining of Ameria (2018). SFPU and SFPU personnel conducted emergency generator start-up procedures for emergency sense are in good working order, and drill and confirmation to start from the new scution connection at Plet 20, in addition, SFPD and secure or the area of increasing and confirmation in procedure and increasing assure systems are in good working order, and to train personnel on operations and joint-agency communications. For example, a full-scale emergency exercise was performed between SFPD and SFPD casel fin January 2016	
Finding Response (Agree/Disagree)	Disagree, partially	
Respondent Assigned by CGJ [Response Due Date]	Chief, San Francisco Fire Department [September 15, 2019]	
Finding (text may be duplicated due to spanning and multiple respondent effects)	In the 2015 MOU between the SFPD and the Chief, San Fr AWS training a annually, but there is no formal is percent or ordical in Department protocol outlining specific joint AWSS exercises or drills using hypothetical disaster scenarios, such as a major earthquake.	
#	F13	
Report Title [Publication Date]	Act Now Before it is Aggressively Expand Aggressively Expand High-Pressure Emergency System (July 17, 2019)	Act Now Before it is Aggressively Epand and Enhance Our and Enhance Our Emergency Firefighting Water System [July 17, 2019]

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Recommendation Response Text	infrastructure and resources to be well prepared to fight fires in all parts of San Francisco is something that will be a focus of the next 10-Year Capital Plan. Per Administrative Code 3.20, that Plan must be submitted to the Mayor and Board no later than March 1 of each dod-numbered year for approval no later than May 1. The requested presentation would be delivered as part of that Plan's submission to enable holistic planning across San Francisco's resilience challenges. Updates available on this timeline would be included. The City cannot discuss the project and timeline would the EER 2020 plan passes. For this reason, the City will sync this recommendation with the Capital Plan, and push back the timeline to December 31, 2021.	The commitment of sources for specific uses on specific timelines for San Francisco's public infrastructure is the work of the 10-Year Capital Plan. The plan discussed in Recommendation 1 will be acknowledged in the Capital Plan, and based on analysis, will be done on the capital Plan, and based on analysis, will be done on the capital Plan timeline. The capital planning process gathers, documents, and balances planned infrastructure portfolio and across San Francisco's resilience challenges. The Capital Plan has longstanding funding principles to guide the prioritisation of public infrastructure investments. These investments are tiered; (1) advestments. These investments are tiered; (1) described the prioritisation of public infrastructure investments. These investments are tiered; (1) davisme to built safety and enhance resilience; (3) davance planned and programmantic needs; and Cisy promote economic development. In the next LOV-ear Capital Plan and those that follow, the City will continue to analyze priority projects and propers and dietarity sources to advance hose propers and dietarity sources to advance those single program out of context and without regard for the trade-offs of that commitment unlinear bilities elsewhere in the portfolio.	Will be implemented The analysis will be performed as part of the City's 10-Year Capital Plan development process. The next full update to the Capital Plan will be submitted to the Mayor and Board not later than March 1, 2021, for approval no later than May 1, 2021.
Recommendation Response (Implementation)	Will be implemented	analysis	Will be implemented
Respondent Assigned by CGJ [Response Due Date]	(September 15, 2019)	Gry Administrator [September 15, 2019]	(iy Administrator (September 15, 2019)
Recommendation (text may be duplicated due to spanning and multiple respondent effects)	By no later than December 31, 2020, the Mayor, Gity Administrator the SFOLC, the SFD, and the Office of Resilience [September 15, 2019] and and Capital Planning should finity present to the Board of Supenvisors a detailed plan to ensure the City is well prepared to fight fires in all parts of San Francisco in the event of a 1906-magnitude (7.8) earthquake.	The plan discussed in Recommendation R1 should include a detailed proposal, including financing sources, for the installation within 15 years of a high-pressure, multi-sourced, seismically safe emergency water system for those parts of the City that don't currently have one, i.e., by no later than June 30, 2034.	By no later than June 30, 2022, the Mayor and Gity Administrator the Board of Supervisors should analyze whether [September 15, 2019] to propose a separate bond for the development of a high-pressure, multi-sourced, seekincially safe emergency water system for those parts of the City that don't currently have one, with a larget date of completing construction by no later than June 30, 2034.
R# [for F#]	(for F1-F6)	(for F1-F6)	R8 [for F5, F6, F11]
Finding Response Text	Decisions about programming and funding levels future ESIR boards and other complementary is sources that could support the expansion of the AWSS have yet to be made.	Decisions about programming and funding levels out future ESRB future ESRB doubt and other complementary (Sources that could support the expansion of the AWSS have yet to be made.	Decisions about programming and funding levels of future ESER bonds and other complementary [Sources that could support the expansion of the AWSS have yet to be made.
Finding Response (Agree/Disagree)	Disagree, wholiy	Disagree, wholly	Disagree, wholly
Respondent Assigned by CGJ [Response Due Date]	City Administrator [September 15, 2019]	(September 15, 2019)	(September 15, 2019)
Finding (text may be duplicated due to spanning and multiple respondent effects)	Unless the City increases funding levels, it will be legy Administrator several decades (i.e., after the USGs predicts several decades (i.e., after the USGs predicts one or more major earthquakes will occur) before the southern parts of the City have a high-pressure, multi-sourced, seismically safe emergency firefighting water supply.	Unless the City increases funding levels, it will be City Administrator several decades (Lis., 205 predicts (September 15, 20 one or more major earthquakes will occur) before the southern parts of the City have a high-pressure, multi-sourced, seismically safe emergency firefighting water supply.	Unless the City increases funding levels, it will be City Administrator several decades (i.e., after the USGS predicts [September 15, 20 one or more major earthquakes will occur) persone the southern parts of the City have a high-persone, multi-sourced, seismically sale emergency firefighting water supply.
#	22	<b>9</b> 2	85
Report Title [Publication Date]	Act Now Before it is For Local Late. Aggressively: Expand and Enhance Our and Enhance Our Firefighting Water System (July 17, 2019)	Act Now Before it is Too Late: Too Late: and Enhance Our mild-pressure Emergency Firefighting Water System [July 17, 2019]	Act Now Before it is Too Late: Aggressively Expand and Enhance Our High-Pressure Emergency Firefighting Water System (July 17, 2019)

Recommendation Response Text	Will be implemented The analysis will be performed as part of the Christ St. OtYear Capital Plan development process.  The next full update to the Capital Plan will be submitted to the Mayor and Board not later than March 1, 2021, for approval no later than May 1, 2021.
Recommendation Response (Implementation)	Will be implemented
Respondent Assigned by CGJ [Response Due Date]	[September 15, 2019]
Recommendation (text may be duplicated due to spanning and multiple respondent effects)	R8 By no later than June 30, 2022, the Mayor and Gity Administrator [for F5, F6, the Boad of Supervisors should analyze whether [September 15, 2019] to propose a separate bond for the development of a high-pressure, multi-sourced, seismically asfe emegancy water system for those parts of the Gity that don't currently have one, with a larget date of completing construction by no later than June 30, 2034.
R# [for F#]	[107   88   88   108
Finding Response Text	The EWS was bull after the 1906 earthquake, and its location, primarily in the northeast portion of San Francisco, corresponds to the location of the majority of the city's population at that time, Since 2010, the SPICC, SFID, and Public Works have made critical improvements to the existing EFWS system. Expanding the EWS prior to evening that the existing EFWS is resilient and reliable would have contradicted best engineering practices. The SFPUC and SFFD are developing plans that vould implement a resilient, robust, and redundant potable EWS for the Westside of San Francisco. The potable EFWS that is being developed and analyzed would propose the best method for bringing a robust and resilient high-pressure firefighting water system to the Western neighborhoods in San Francisco that is capable of providing water to the SFFD firefighters at the high-pressure needed for firefighters to combat large fires alwaped edgement and potentially two new pump stations likely to be amonner that allows for agility and the flexibility to add new technologies and water sources, and in a manner that allows the piping network to be extended in the future to serve additional areas.
Finding Response (Agree/Disagree)	Disagree, partially
Respondent Assigned by CGJ [Response Due Date]	Gity Administrator [September 15, 2019]
Finding (text may be duplicated due to spanning and multiple respondent effects)	The City does not have a timeline to fund and City Administrator complete development of a high-pressure, multi- [September 15, 2019] sourced, seismically safe emergency water supply for all parts of the City, including poor neighborhoods that his torically have not been as well protected as the downtown business district and many richer neighborhoods.
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Report Title [Publication Date]	Atowa Before it is Too Jata Aggressively Expand and Enhance Our And Enhance Our Fireighting Water System [July 17, 2019]

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Recommendation Response Text	Not applicable to the San Francisco Department of the Environment
Recommendation Response (Impiementation)	will not be implemented because it is not warranted or reasonable
Respondent Assigned by Recommendation CGJ Response [Response Due Date] (Implementation)	Director, San Francisco Department of the Environment [September 15, 2019]
Recommendation (text may be duplicated due to spanning and multiple respondent effects)	The SFPUC, the SFFD and the SF Department of Orientor, San Francisco   Ifor F8-F9   the Environment should study adding salt-water Department of the pump stations to improve the redundancy of Environment water sources, especially on the west side.   September 15, 2019   Findings and recommendations from this study should be presented to the Board of Supervisors by no later than June 30, 2021.
R# [for F#]	R6 17 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
esponse Finding Response Text (sagree)	
Finding Response (Agree/Disagree)	
Respondent Assigned by CGJ [Response Due Date]	
Finding (text may be duplicated due to spanning and multiple respondent effects)	
#	
Report Title [Publication Date]	Act Now Before it is Too tate: Aggressively Expand and Enhance Our High-Pressure Emergency Friefighting Water System (July 17, 2019)